SONY-SP0093

VPH-1292Q/QM/QMG

RM-PJ1292

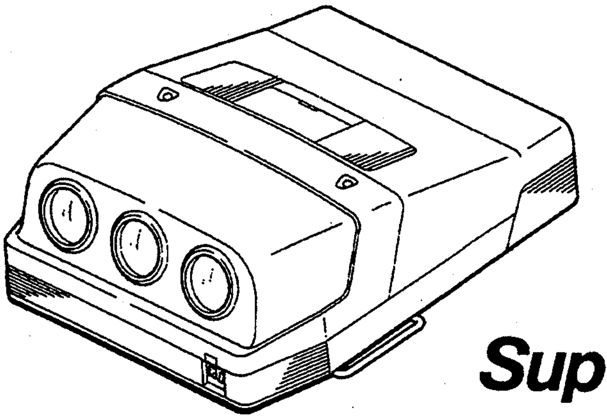
SERVICE MANUAL

US Model
Canadian Model

VPH-1292Q
Chassis No. SCC-D83J-A

AEP Model

VPH-1292QM
Chassis No. SCC-D82H-A
VPH-1292QMG
Chassis No. SCC-D82J-A



SuperGraphics

MODELS OF THE SAME SERIES	
VPH-1292Q/QM/QMG	

SPECIFICATIONS

VPH-1292Q/QM MODEL

General

Dimensions	746 × 386 × 1000 mm (w/h/d) (29 3/8 × 15 1/4 × 39 3/8 inches)
Mass	92 kg (202 lb 13 oz)
Power requirements	120 V AC1), 50/60 Hz (for the VPH-1292Q) 220 to 240 V AC, 50/60 Hz (for the VPH-1292QM)
Power consumption	850 W
Operating temperature	0 C° to +40 C° (32 F to 104 F)
Operating humidity	35% to 85%
Storage temperature	– 20 C° to +60 C° (– 4 F to 140 F)
Storage humidity	0% to 90%

— continued on next page —

MULTISCAN PROJECTOR

SONY®

MICROFILM

VPH-1292Q/QM MODEL

Optical characteristics

Projection system	3 picture tubes, 3 lenses, horizontal inline system
Picture tube	9-inch (7.7 inches phosphor size) high luminance, optical coupled, electromagnetic focus tubes
Projection lens	HACC (High-resolution Aspherical and Color Corrected) multicoating lenses F 1.15/167 mm
Projected picture size	Factory-adjusted to 120 inches (diagonal measure) Range: 90 to 300 inches (diagonal measure) adjustable
Light output	ANSI lumen[2] (color temperature: 6500° K) 225 ln (fH: 135 kHz, fV: 50 Hz) 190 ln (fH: 15 kHz, fV: 60 Hz) Peak white: 700 ln All white: 300 ln

Electrical characteristics

Color system	NTSC, PAL, SECAM and NTSC$_{4.43}$ systems, switched automatically
Resolution	700 TV lines (VIDEO input) 2000 × 1600 pixels (RGB input at fH:94 kHz, fV:60 Hz)
RGB inputs	Horizontal frequency: 15 kHz to 135 kHz Vertical frequency: 38 Hz to 150 Hz
Test signal	Cross-hair test pattern generator is incorporated.

VIDEO INPUT connectors
Y/C: 4-pin mini-DIN type (1)
Y (luminance) signal: 1Vp-p ±2dB, sync negative. 75 ohms terminated
C (chrominance) signal: burst 0.286 Vp-p ±2dB. 75 ohms terminated (NTSC) 0.3 Vp-p ±2dB, 75 ohms terminated (PAL)
VIDEO: BNC type (1)
Composite video input, 1 Vp-p ±2 dB, sync negative 75 ohms terminated

RGB IN R connector: BNC type (1)
Red input, 0.7 Vp-p ±2 dB, 75 ohms terminated, positive

RGB IN G/G SYNC connector: BNC type (1)
Green input, 0.7 Vp-p ±2dB, 75 ohms terminated, positive
Green with sync input, 1 Vp-p ±2dB, 75 ohms terminated, positive

RGB IN B connector: BNC type (1)
Blue input, 0.7 Vp-p ±2 dB, 75 ohms terminated, positive

RGB IN SYNC/HD connector: BNC type (1)
Composite sync input, 0.6 to 8 Vp-p, high impedance, sync positive/negative
Horizontal sync input, 0.6 to 8 Vp-p, high-impedance, sync positive/negative
Width: wider than horizontal period(1H)

RGB IN VD connector: BNC type (1)
Vertical sync input, 0.6 to 8 Vp-p, high impedance, sync positive/negative
Width: wider than horizontal period(1H)

REMOTE 1 connector: 14-pin DIN type (1)
(For details, see "Signal assignment" on next page.)

REMOTE 2 connector: D-sub 9-pin DIN type (1)
(For details, see "Signal assignment" on next page.)

CONTROL S IN connector: Minijack type (1)
5 Vp-p

VIDEO OUT connector: BNC type (1)
Composite video output, 1 Vp-p ±2 dB, impedance 75 ohms loop-through output of the VIDEO IN connector

CONTROL S OUT connector: Minijack type (1)
5 Vp-p

---

1) 120V operation when using the projector in the North American region
2) ANSI lumen is a measuring method of American National Standard IT 7.215.

Supplied accessories

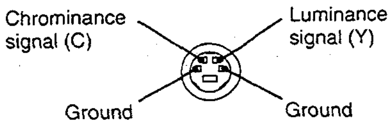
AA (R6) batteries (3)
AC power cord (1)
Remote control cable (15m (49.5 feet)) (1)
Remote control unit RM-PJ1292 (1)
Grip (4)
Hexagonal wrench (1)
Operating Instructions (1)

Optional accessories

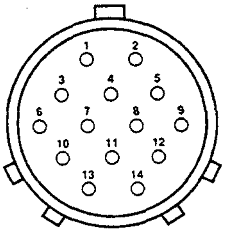
Signal Interface Switcher	PC-1271/1271M
Projector Suspension Support	PSS-1270
Screens	VPS-100FH (100" flat) VPS-120FH (120" flat)
Interface boards	IFB-11: Analog RGB inputs with five BNC type connectors IFB-20:Analog RGB input with D-sub 9-pin type connector IFB-30:Digital RGB input with D-sub 9-pin type connector IFB-1000:Composite video input with BNC type connector S-Video input with mini DIN 4-pin type connector IFB-1200:Component video input with three BNC type connectors IFB-1300:Y/PB/PR input three BNC type connectors IFB-3000:Video three input, Y/C video input or Component video input with three BNC type connectors IFB-101:Index board
Signal Interface Unit	IFU-1271/1271M

Signal assignment

Y/C connector (4-pin mini-DIN type)

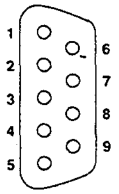


REMOTE 1 connector (14-pin DIN type)



Pin No.	Signal
1	GND
2	HD/Composite Sync
3	SIRCS
4	NC (No Connection)
5	GND (SIRCS)
6	B/C
7	GND (B/C)
8	GND (B/Y)
9	G/Y
10	RGB/Video
11	R/Composite video
12	Composite video/YC
13	NC (No Connection)
14	VD

REMOTE 2 connector (D-sub 9-pin type, RS-422 type format)



Pin No	Signal
1	Frame Ground
2	Transit A
3	Receive B
4	Receive common
5	Spare
6	Transmit common
7	Transmit B
8	Receive A
9	Frame ground

Design and specifications are subject to change without notice.

VPH-1292QMG MODEL

General

Dimensions	746 × 386 × 1000 mm (w/h/d) (29 $^{3}/_{8}$ × 15 $^{1}/_{4}$ × 39 $^{3}/_{8}$ inches)
Mass	92 kg (202 lb 13 oz)
Power requirements	220 to 240V AC, 50/60 Hz
Power consumption	850 W
Operating temperature	0 C° to +40 C° (32 F to 104 F)
Operating humidity	35% to 85%
Storage temperature	– 20 C° to +60 C° (– 4 F to 140 F)
Storage humidity	0% to 90%

Optical characteristics

Projection system	3 picture tubes, 3 lenses, horizontal inline system
Picture tube	9-inch (7.7 inches phosphor size) high luminance, optical coupled, electromagnetic focus tubes
Projection lens	HACC (High-resolution Aspherical and Color Corrected) multicoating lenses F 1.15/167 mm
Projected picture size	Factory-adjusted to 120 inches (diagonal measure) Range: 90 to 300 inches (diagonal measure) adjustable
Light output	ANSI lumen[1] (color temperature: 6500° K) 225 ln (fH: 135 kHz, fV: 50 Hz) 190 ln (fH: 15 kHz, fV: 60 Hz) Peak white: 700 ln All white: 300 ln

Electrical characteristics

Color system	NTSC, PAL, SECAM and NTSC$_{4.43}$ systems, switched automatically (input from the IFB-1000)
Resolution	700 TV lines (input from the IFB-1000) 2000 × 1600 pixels (RGB input at fH:94 kHz, fV:60 Hz)
RGB inputs	Horizontal frequency: 15 kHz to 135 kHz Vertical frequency: 38 Hz to 150 Hz
Test signal	Cross-hair test pattern generator is incorporated.
RGB IN R connector: BNC type (1)	Red input, 0.7 Vp-p ±2 dB, 75 ohms terminated, positive
RGB IN G/G SYNC connector: BNC type (1)	Green input, 0.7 Vp-p ±2dB, 75 ohms terminated, positive Green with sync input, 1 Vp-p ±2dB, 75 ohms terminated, positive
RGB IN B connector: BNC type (1)	Blue input, 0.7 Vp-p ±2 dB, 75 ohms terminated, positive
RGB IN SYNC/HD connector: BNC type (1)	Composite sync input, 0.6 to 8 Vp-p, high impedance, sync positive/negative Horizontal sync input, 0.6 to 8 Vp-p, high-impedance, sync positive/negative Width: wider than horizontal period(1H)
RGB IN VD connector: BNC type (1)	Vertical sync input, 0.6 to 8 Vp-p, high impedance, sync positive/negative

---

[1] ANSI lumen is a measuring method of American National Standard IT 7.215.

Width: wider than horizontal period(1H)
REMOTE 1 connector: 14-pin DIN type (1)
(For details, see "Signal assignment" on next page.)
REMOTE 2 connector: D-sub 9-pin DIN type (1)
(For details, see "Signal assignment" on next page.)
CONTROL S IN connector: Minijack type (1)
5 Vp-p
CONTROL S OUT connector: Minijack type (1)
5 Vp-p

Supplied accessories

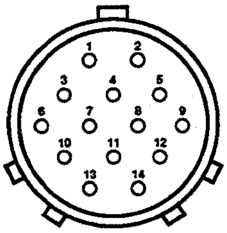
AA (R6) batteries (3)
AC power cord (1)
Remote control cable (15m (49.5 feet)) (1)
Remote control unit RM-PJ1292 (1)
Grip (4)
Hexagonal wrench (1)
Operating Instructions (1)

Optional accessories

Signal Interface Switcher
PC-1271M
Projector Suspension Support
PSS-1270
Screens VPS-100FH (100" flat)
VPS-120FH (120" flat)
Interface boards IFB-11: Analog RGB inputs with five BNC type connectors
IFB-20:Analog RGB input with D-sub 9-pin type connector
IFB-30:Digital RGB input with D-sub 9-pin type connector
IFB-1000:Composite video input with BNC type connector
S-Video input with mini DIN 4-pin type connector
IFB-1200:Component video input with three BNC type connectors
IFB-1300:Y/PB/PR input three BNC type connectors
IFB-3000:Video three input, Y/C video input or Component video input with three BNC type connectors
IFB-101:Index board
Signal Interface Unit
IFU-1271M

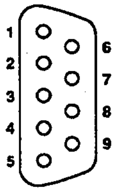
Signal assignment

REMOTE 1 connector (14-pin DIN type)



Pin No.	Signal
1	GND
2	HD/Composite Sync
3	SIRCS
4	NC (No Connection)
5	GND (SIRCS)
6	B/C
7	GND (B/C)
8	GND (B/Y)
9	G/Y
10	RGB/Video
11	R/Composite video
12	Composite video/YC
13	NC (No Connection)
14	VD

REMOTE 2 connector (D-sub 9-pin type, RS-422 type format)



Pin No	Signal
1	Frame Ground
2	Transit A
3	Receive B
4	Receive common
5	Spare
6	Transmit common
7	Transmit B
8	Receive A
9	Frame ground

Design and specifications are subject to change without notice.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

ATTENTION!!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE.
LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÈS PAR UNE TRAME ET PAR UNE MARQUE ⚠ SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

SAFETY CHECK-OUT
(US Model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the B+ and HV to see if they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
8. Check the metal trim, metallized knobs, screws, and all other exposed metal parts for AC leakage.
   Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufactures' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

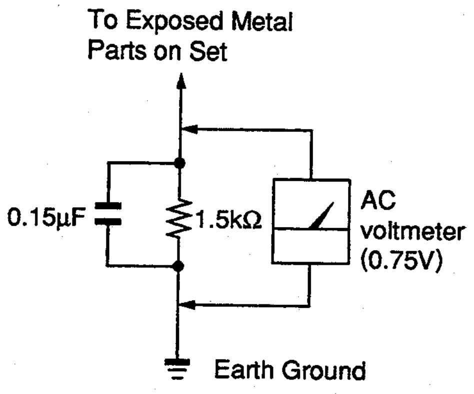


Fig. A. Using an AC voltmeter to check AC leakage.

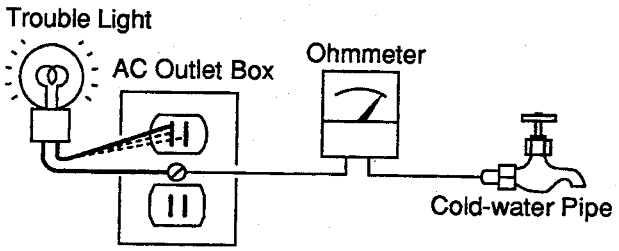


Fig. B. Checking for earth ground.

TABLE OF CONTENTS

Section *Title* *Page*

1. GENERAL

1-1. OPERATING INSTRUCTION

Features ···· 9
Location and Function of Controls ···· 10
Projecting ···· 13
Centering Adjustment ···· 20
Installation Diagrams ···· 21
System Connections ···· 22
List of Messages ···· 26
Index ···· 29

1-2. INSTALLATION

Installation Procedures ···· 30
Installation Digrams ···· 30
Modifying Parts ···· 38
Location and Function of Connectors ···· 42
Connecting Directly to the Projector ···· 43
Connecting When the Projector Is Away From Other Equipment ···· 46
Connecting More Than Four Input Sources ···· 48
Adjustment Procedures ···· 50
For Remote Control ···· 50
PAGE Displays and Test Patterns ···· 53
Adjusting the Focus ···· 56
Adjusting the Registration ···· 60
Fine Adjustment for Each Input Signal ···· 72
Resetting the Data ···· 76
Projecting the Setting ···· 78
Adjusting the Picture Quality ···· 78
Changing the Initialization Period ···· 79
Turning off the "OFF" indication on the Screen ···· 79
List of Messages ···· 80
List of the Projection Distance by Angle of Optical Axis ···· 84
Index ···· 90

2. DISASSEMBLY

2-1. Cover Removal ···· 91
2-2. Lens Removal ···· 91
2-3. Power Block Removal ···· 92
2-4. ED Block Removal ···· 92
2-5. High-Voltage Block Removal ···· 93
2-6. Interface Unit, BA, BB and BC Boards Removal ···· 93
2-7. Y, DA, DB, DD and DE Boards Removal ···· 94
2-8. EBRG and EBB Boards Removal ···· 94
2-9. DM Board Removal ···· 95
2-10. Attachment Direction of the DC Fan ···· 95
2-11. Picture Tube Removal ···· 96
2-12. CAB and CBB Boards Removal ···· 96

3. SET-UP ADJUSTMENT

3-1. Neck Assembly Installation ···· 97
3-2. Work Condition for Adjustment ···· 97
3-3. Focus Adjustment ···· 98
3-4. Registration Adjustment ···· 104
3-5. White Balance Adjustment ···· 105
3-6. Blanking Adjustment ···· 107
3-7. High-Voltage Picture Bending Adjustment ···· 108

4. SAFETY RELATED ADJUSTMENT ···· 109

5. ELECTRICAL ADJUSTMENT

5-1. CAR, CAG, CAB, CBR, CBG and CBB Boards Adjustment ···· 113
5-2. DA Board Adjustment ···· 117
5-3. DE Board Adjustment ···· 119

6. DIAGRAMS

6-1. Circuit Boards Location ···· 122
6-2. Block Diagrams ···· 123
6-3. Frame Schematic Diagram ···· 145
6-4. Schematic Diagrams and Printed Wiring Boards ···· 148
  BA Board ···· 149
  BB and BD Boards ···· 158
  BM Board ···· 166
  BC, L and QM Boards ···· 171
  DA Board ···· 177
  DB Board ···· 185
  DE Board ···· 193
  DCA and DCC Boards ···· 205
  DC Board ···· 207
  DD Board ···· 213
  DM Board ···· 219
  Y Board ···· 224
  DG, NA and NB Boards ···· 231
  EA Board ···· 235
  EEA and EEB Boards ···· 238
  E Board ···· 244
  EBB Board ···· 250
  CFB Board ···· 255
  EBA, EBC and EBD Boards ···· 257
  EBRG Board ···· 260
  EC and ED Boards ···· 267
  CAR Board ···· 274
  CAG Board ···· 281
  CAB Board ···· 288
  PA, PB and PC Boards ···· 295
  CBR Board ···· 302
  CBG Board ···· 308
  CBB Board ···· 314
  U1 and U2 Boards ···· 320
  U3 Board ···· 325
  U4 Board ···· 330
6-5. Semiconductors ···· 333

7. EXPLODED VIEWS

7-1. Cover ···· 336
7-2. ED Block ···· 337
7-3. Power Block ···· 338
7-4. C Shield Block ···· 339
7-5. Picture Tube ···· 340
7-6. Chassis ···· 341

8. ELECTRICAL PARTS LIST ···· 342

SECTION 1
GENERAL

The operating instructions mentioned here are partical abstracts from the Operating Instruction Manual and Installation Manual. The page numbers of the Operating Instruction Manual and Installation Manual remain as in the manual.

1-1. OPERATING INSTRUCTION

VPH-1292Q/QM MODEL ONLY

Features

Multiscan projector

This projector accepts and automatically detects horizontal scanning frequencies between 15 kHz and 135 kHz and vertical scanning frequencies between 38 Hz and 150 Hz.
In addition to high-resolution pictures from computers, you can also project pictures from teletext decoders, VCRs, and video cameras.

Bright image – light output 700 lumen[1]

A newly developed phosphor, large CRT, and improved high voltage circuitry provides super brightness.

High resolution – 2000 × 1600 pixels

High-quality picture with a resolution of 2000 × 1600 pixels is obtained through the combination of a newly developed 9" electromagnetic focus CRT with the electron gun to improve the beam spot and a hybrid Sony HACC (High-resolution Aspherical and Color Corrected) lens. In addition, since the projector adopts the optical coupling technologies, double-focus lens system and an anti-reflection coating, you can obtain fine-detail, sharp pictures with improved contrast in the corners and screen center.

Wireless and wired remote control

You can control all adjustments remotely from both the front and rear of the projector with the supplied remote control. You can also use the control as a wired remote control by connecting to the projector with the supplied cable.

On-screen display

Adjustment instructions and indicators such as picture controls, guide and error messages, can be displayed on the screen. The current setting of each control and input condition can also be displayed.

Other features

Four color systems available
NTSC, PAL, SECAM, or $NTSC_{4.43}$ color system is selected automatically.

Various installation possibilities
The projector is designed to be installed on a desk, floor, or ceiling and can be used with a flat screen or rear projection screen.

Illuminated remote control and control panel
When you press the LIGHT button on the remote control or projector control panel, the indications light for easy operation in dim conditions.

Internal test signal
You can easily adjust the centering with the built-in cross-hair test signal. No external test signal is needed.

---

[1] 225 ANSI lumen (fH: 135 kHz, fV: 50 Hz, 6500°K)
190 ANSI lumen (fH: 15 kHz, fV: 60 Hz, 6500°K)

VPH-1292QMG MODEL ONLY

Features

Multiscan projector

This projector accepts and automatically detects horizontal scanning frequencies between 15 kHz and 135 kHz and vertical scanning frequencies between 38 Hz and 150 Hz.
In addition to high-resolution pictures from computers, you can also project pictures from teletext decoders, VCRs, and video cameras.

Bright image – light output 700 lumen[1]

A newly developed phosphor, large CRT, and improved high voltage circuitry provides super brightness.

High resolution – 2000 × 1600 pixels

High-quality picture with a resolution of 2000 × 1600 pixels is obtained through the combination of a newly developed 9" electromagnetic focus CRT with the electron gun to improve the beam spot and a hybrid Sony HACC (High-resolution Aspherical and Color Corrected) lens. In addition, since the projector adopts the optical coupling technologies, double-focus lens system and an anti-reflection coating, you can obtain fine-detail, sharp pictures with improved contrast in the corners and screen center.

Wireless and wired remote control

You can control all adjustments remotely from both the front and rear of the projector with the supplied remote control. You can also use the control as a wired remote control by connecting to the projector with the supplied cable.

On-screen display

Adjustment instructions and indicators such as picture controls, guide and error messages, can be displayed on the screen. The current setting of each control and input condition can also be displayed.

Other features

Four color systems available
NTSC, PAL, SECAM, or $NTSC_{4.43}$ color system is selected automatically (when installing the optional IFB-1000 to the projector).

Various installation possibilities
The projector is designed to be installed on a desk, floor, or ceiling and can be used with a flat screen or rear projection screen.

Illuminated remote control and control panel
When you press the LIGHT button on the remote control or projector control panel, the indications light for easy operation in dim conditions.

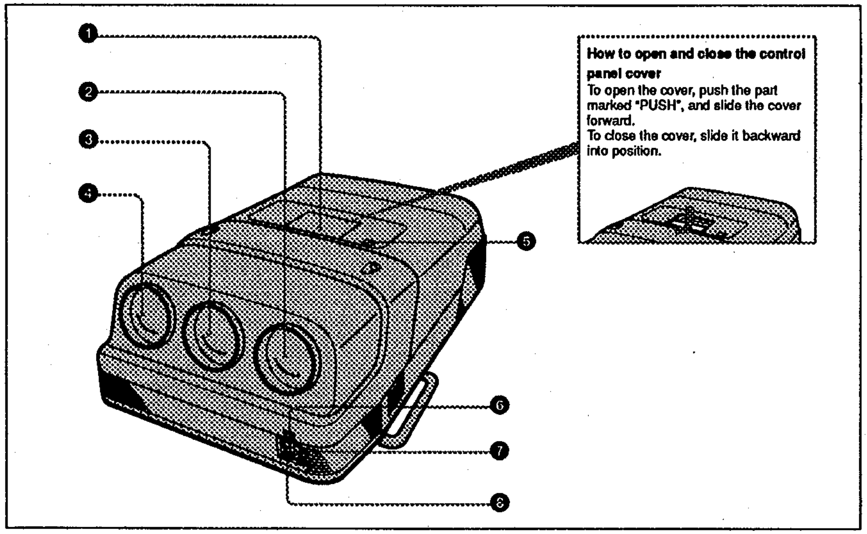
Internal test signal
You can easily adjust the centering with the built-in cross-hair test signal. No external test signal is needed.

---

[1] 225 ANSI lumen (fH: 135 kHz, fV: 50 Hz, 6500°K)
190 ANSI lumen (fH: 15 kHz, fV: 60 Hz, 6500°K)

Location and Function of Controls

Front



How to open and close the control panel cover
To open the cover, push the part marked "PUSH", and slide the cover forward.
To close the cover, slide it backward into position.

❶ **Control panel**
The control keys are inside the panel.

❷ **Red lens**

❸ **Green lens**

❹ **Blue lens**

❺ **Error code window (inside the cover)**

❻ **Front remote control detector**

❼ **MAIN POWER switch**

❽ **AC IN socket**
Connect the supplied AC power cord here.
This socket accepts 220 to 240 V AC .

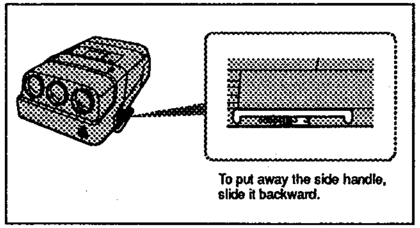
Location and Function of Controls

Bottom

Carrying the projector

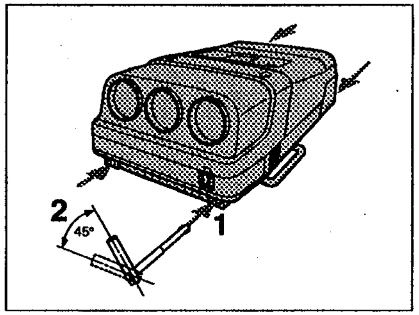
You can carry the projector by using the handle.

Using the side handles
Pull out to use. To put away the side handle, slide it backward.



To put away the side handle, slide it backward.

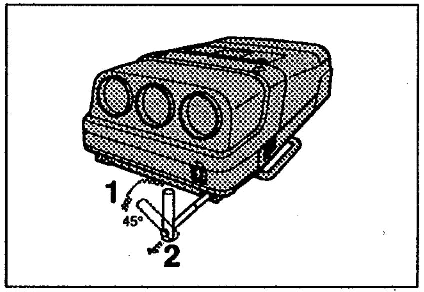
Inserting the front or rear grips



1 Insert the grip as illustrated above.

2 Turn the grip until it is fixed.

Removing the front or rear grips

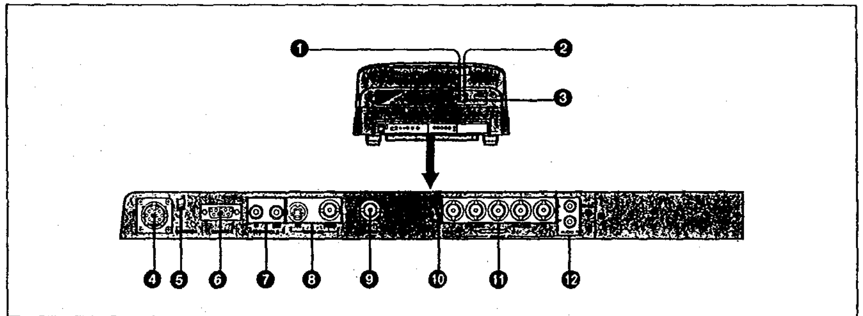


1 While pressing the grip release button, turn the grip until it is unfixed.

2 Pull out the handle.

VPH-1292Q/QM MODEL ONLY

Rear



① Rear remote control detector

② POWER indicator
Lights in green when the power is on.

③ STANDBY indicator
Lights in red when the MAIN POWER switch is turned on. This means that you can control the projector with the remote control.

Note
When the MAIN POWER switch is turned off, there will be a slight delay before the indicator goes off.

④ REMOTE 1 connector (14-pin, male)
Connects to the REMOTE 1 connector of the optional PC-1271/1271M Signal Interface Switcher.

⑤ 5BNC switch
Normally, set to the NORMAL.
If you wish to project the high resolution picture using the PC-1271/1271M Signal Interface Switcher, set to the 5BNC position.
For details, see "When Projecting the High Resolution Pictures" on page 32 (E).

⑥ REMOTE 2 connector (9-pin, female)
Connects the RS-422 interface for communication with a computer.

⑦ CONTROL S IN/OUT jacks (phono type)
Connect to the CONTROL S connectors of other Sony equipment. You can control the whole system with a single remote control.

CONTROL S IN: Connects to the CONTROL S OUT jack of the supplied remote control to be used as a wired remote control.

Note
When using this connector, the remote control detector on the projector does not function.

⑧ VIDEO IN connectors
Y/C (4-pin, mini-DIN type): Connects to the Y/C video output (S VIDEO OUT) of a VCR.
VIDEO (BNC type): Connects to the composite video output of video equipment.

Note
The VIDEO connector is disconnected automatically when a cable is connected to the Y/C connecter.

⑨ VIDEO OUT connector (BNC type)
Connects to the video input of a color monitor.
The output signal is the loop-through output from the input signal to the VIDEO IN connectors.

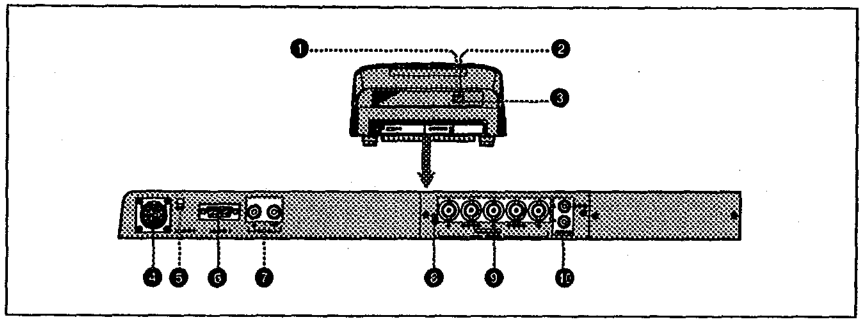
⑩ Indicator
Lights when INPUT A mode is selected.

⑪ RGB IN connectors (BNC type)
R, G/G SYNC, B, SYNC/HD, VD connectors:
Connect to the RGB outputs of a computer or a video camera.

⑫ AUDIO IN L/R jacks (phono type)
Not used.

VPH-1292QMG MODEL ONLY

Rear



① Rear remote control detector

② POWER indicator
Lights in green when the power is on.

③ STANDBY indicator
Lights in red when the MAIN POWER switch is turned on. This means that you can control the projector with the remote control.

Note
When the MAIN POWER switch is turned off, there will be a slight delay before the indicator goes off.

④ REMOTE 1 connector (14-pin, male)
Connects to the REMOTE 1 connector of the optional PC-1271M Signal Interface Switcher.

⑤ 5BNC switch
Normally, set to the NORMAL.
If you wish to project the high resolution picture using the PC-1271M Signal Interface Switcher, set to the 5BNC position.
For details, see "When Projecting the High Resolution Pictures" on page 32 (E).

⑥ REMOTE 2 connector (9-pin, female)
Connects the RS-422 interface for communication with a computer.

⑦ CONTROL S IN/OUT jacks (phono type)
Connect to the CONTROL S connectors of other Sony equipment. You can control the whole system with a single remote control.

CONTROL S IN: Connects to the CONTROL S OUT jack of the supplied remote control to be used as a wired remote control.

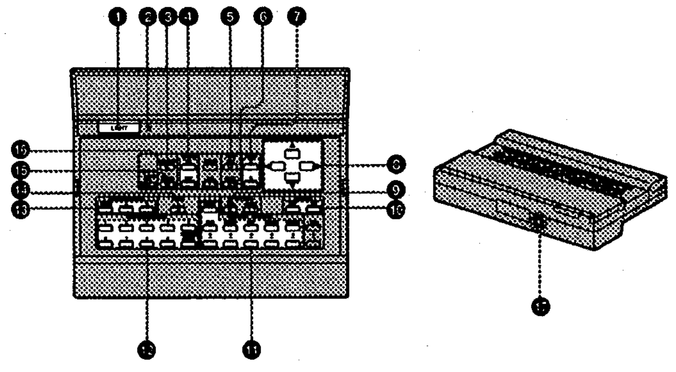
Note
When using this connector, the remote control detector on the projector does not function.

⑧ Indicator
Lights when INPUT A mode is selected.

⑨ RGB IN connectors (BNC type)
R, G/G SYNC, B, SYNC/HD, VD connectors:
Connect to the RGB outputs of a computer or a video camera.

⑩ AUDIO IN L/R jacks (phono type)
Not used.

Remote Control



① LIGHT button
Illuminates key indicators on the remote control.
If you do not use the keys for approximately 30 seconds, the light automatically goes out.

② Transmission indicator
Lights each time you press a key. Replace the batteries when this indicator does not light.

③ MEMORY key
Stores various adjustment data into memory.

④ STATUS ON/OFF key
ON: Restores the on-screen display.
OFF: Removes the on-screen display.

Note
The PAGE display appears even when you press the OFF key.

⑤ RGB SIZE key
Adjusts the size of the picture for the video and RGB signal inputs.
To adjust the size, press this key. You can adjust the picture size with the four arrow keys. After adjustment, save the data by pressing the MEMORY key.
◀: Reduces the horizontal size.
▶: Expands the horizontal size.
▲: Expands the vertical size.
▼: Reduces the vertical size.

⑥ RGB SHIFT key
Adjusts the shift of the picture for shift of the picture the RGB signal input.
To adjust the shift, press this key. You can adjust the picture shift with four arrow keys. The picture shifts according to the direction of the arrow. After adjustment, save the data by pressing the MEMORY key.

Note
This key does not function with the composite or Y/C video signal input.

⑦ CENT R/B keys
Adjust the centering of the red and blue.
You can adjust the centering with the four arrow keys.
CENT R: Enters the red centering adjustment mode.
CENT B: Enters the blue centering adjustment mode.

⑧ Arrow keys
Used for various adjustment functions.

⑨ PJ MUTING PIC key
Cuts off the picture. To restore the picture, press the key again or the CONTR + key.

⑩ POWER ON/OFF keys
Turn the projector on and off.

⑪ PICTURE CONTROL keys
Adjust picture condition: hue, sharpness, brightness, color, and contrast. To restore the default levels, press the RESET key.

⑫ SWITCHER/INDEX keys[1]
When the SWITCHER/INDEX select switch is set to SWITCHER
Designate the input from the switcher when the PC 1271M Signal Interface Switcher is connected. The SECOND key is used when two switchers are connected.
To select the input from the second switcher (when the SINGLE/SECOND/OTHER switch on the switcher is set to SECOND), press a number key between 1 and 8 after pressing the SECOND key.
When the SWITCHER/INDEX select switch is set to INDEX
These keys function when the optional IFB-101 Interface Board is installed and multiple projectors are connected.
For details, refer to the Operating Instructions of the IFB-101.

⑬ INPUT SELECT keys
Select the input signal.
A: The signal input from the RGB IN connectors
B: The signal input from the connectors of B section (when the optional interface unit is installed)

⑭ PAGE key
Displays and switches between the following four on-screen displays. (You can adjust parameters on PAGE 1, 2 or 3.)
PAGE 1: Displays the status of STATUS ON/OFF, PIC MUTING ON/OFF.
PAGE 2: Displays the picture conditions parameters; contrast, color, brightness, sharpness and hue.
PAGE 3: Displays the color temperature, clamp setting and vertical shift range.
PAGE 4: Displays the input signal conditions; fH, fV, H/C-sync, V-sync, Sync on Green, input signal, and registration memory block assignment.

⑮ SWITCHER/INDEX select switch[1]
Selects the SWITCHER/INDEX key function.
When using the switcher as the input selector, set to SWITCHER. When using the IFB-101 Interface Board and multiple projectors, set to INDEX.

⑯ ENTER key[1]
Functions when the optional IFB-101 Interface Board is attached and multiple projectors are connected.
For details, refer to the Operating Instructions of the IFB-101.

⑰ CONTROL S OUT connector
Connect the supplied remote control cable to this connector and to the CONTROL S IN connector on the projector for wired remote control application.

Notes for wireless remote control operation

- Be sure that there are no obstructions between the remote control and the projector.
- Operation range is limited. The shorter the distance between the remote control and the projector, the wider the angle within which the remote control can operate the projector.

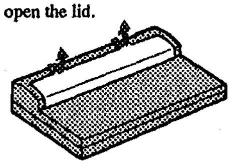
---

[1] These keys are not supplied on the control panel of the projector.

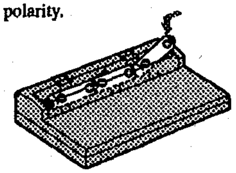
Location and Function of Controls

Battery Installation

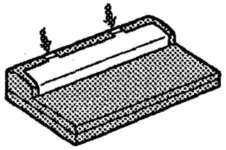
1 Push to open the lid.



2 Install three AA (R6) batteries (supplied) with the correct polarity.



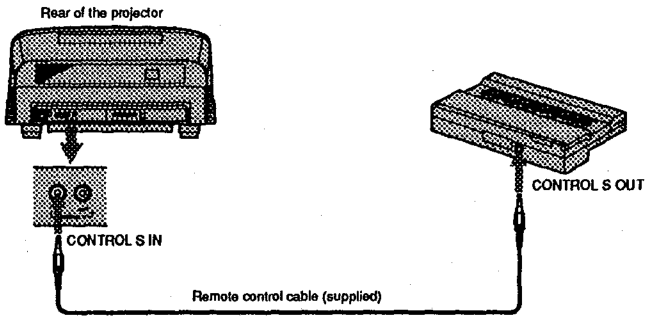
3 Replace the lid.



Notes on batteries

- If the projector does not operate properly, the batteries might be worn out. Replace all three of them with new ones.
- The life of the batteries depends on the frequency of usage and how often you use the LIGHT button. If they are worn out quickly, replace them with new alkaline batteries.
- To avoid damage from possible battery leakage, remove the batteries when the remote control will not be used for a long time.

Connecting the remote control to the projector



Note

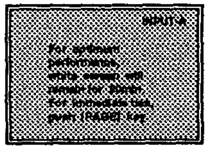
When the cable is connected, the remote control detector of the projector does not function. For wireless operation, be sure to disconnect both plugs from the projector and the remote control.

Projecting

About the Initialization Screen

Before you project the picture, make sure to turn on the projector and allow it to warm up for 20 minutes.

The projector is designed with a warm-up period of about 20 minutes after turning on the power. During this period, it displays a white screen with the message shown below. 35 seconds after the warming up starts, the message will disappear temporarily and will appear subsequently for 5 seconds every 30 seconds.

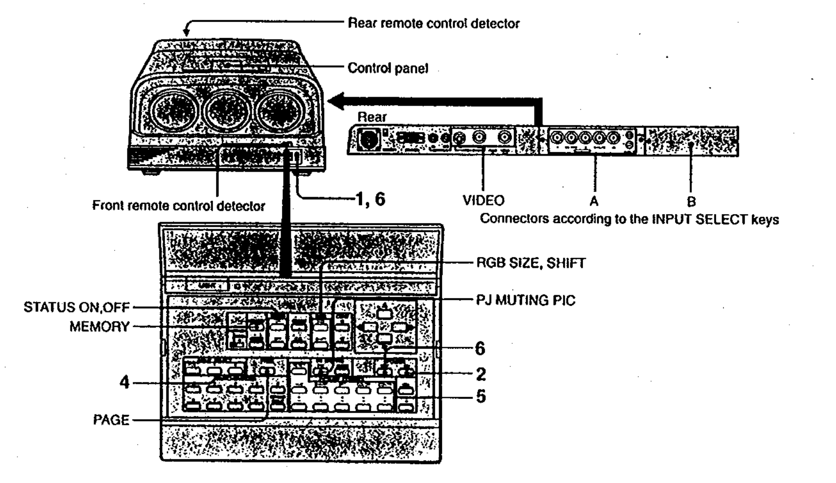


Press the PAGE key to cancel the warming up, if you wish to see the picture immediately.

Projecting

Projection Procedure

You can also use the keys on the control panel to operate the projector. The keys have the same names as on the remote control.


Rear remote control detector
Control panel
Rear
Front remote control detector
1, 6
VIDEO
A
B
Connectors according to the INPUT SELECT keys
RGB SIZE, SHIFT
PJ MUTING PIC
STATUS ON,OFF
MEMORY
4
PAGE
6
2
5

1 Turn on the MAIN POWER switch on the projector.

2 Turn on the projector by pressing the POWER ON key on the remote control or on the control panel of the projector.

The initialization screen appears on the screen.
If you want to see the picture immediately, press the PAGE key to cancel the warming up.

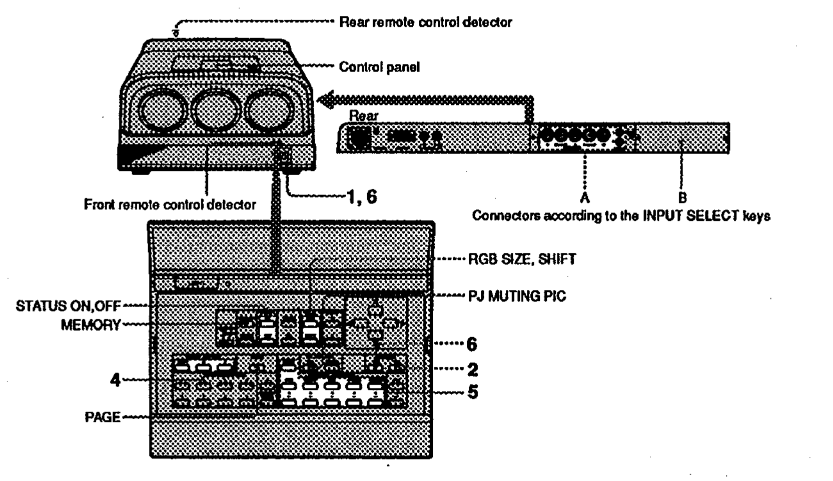
3 Turn on the connected equipment.

4 Select the input signal type by pressing the INPUT SELECT key.
VIDEO: The signal input from the VIDEO IN (Y/C or VIDEO) controls is projected.
A: The signal input from the RGB IN connectors is projected.
B: The signal input from the connectors of B section is projected. (when the optional interface board is installed)
When the PC-1271/1271M Signal Interface Switcher is connected, set the SWITCHER/INDEX select switch to SWITCHER and then select the input with the number keys between 1 and 8. If two switchers are connected, press the SECOND key and then the number key.

Projecting

Projection Procedure

You can also use the keys on the control panel to operate the projector. The keys have the same names as on the remote control.


Rear remote control detector
Control panel
Rear
Front remote control detector
1, 6
A
B
Connectors according to the INPUT SELECT keys
RGB SIZE, SHIFT
PJ MUTING PIC
STATUS ON,OFF
MEMORY
4
PAGE
6
2
5

1 Turn on the MAIN POWER switch on the projector.

2 Turn on the projector by pressing the POWER ON key on the remote control or on the control panel of the projector.

The initialization screen appears on the screen.
If you want to see the picture immediately, press the PAGE key to cancel the warming up.

3 Turn on the connected equipment.

4 Select the input signal type by pressing the INPUT SELECT key.
A: The signal input from the RGB IN connectors is projected.
B: The signal input from the connectors of B section is projected. (when the optional interface board is installed)
When the PC-1271M Signal Interface Switcher is connected, set the SWITCHER/INDEX select switch to SWITCHER and then select the input with the number keys between 1 and 8. If two switchers are connected, press the SECOND key and then the number key.

VPH-1292Q/QM MODEL ONLY

5 Adjust the picture.

6 To turn the power off, press the POWER OFF key on the remote control or on the control panel of the projector, then turn the MAIN POWER switch on the projector.

To remove the on-screen display

Press the STATUS OFF key.
PAGE display remains even when you press the STATUS OFF key.
To restore the on-screen display, press the STATUS ON key.

To turn off the picture

Press the PJ MUTING PIC key.
To restore the previous brightness level, press the PJ MUTING PIC key again or the CONTR + key.

Notes on projecting a picture input from the VIDEO IN connectors

- You can adjust the picture size with the RGB SIZE and arrow keys.
- You cannot adjust the picture shift.

For details, see "Adjusting the Size and Shift of the Picture" on page 20 (E).

Notes on projecting a picture input from the RGB IN connectors

Adjust the size and shift of the picture using the RGB SIZE/SHIFT key, RGB SIZE/SHIFT key and arrow keys, if necessary.
For details, see "Adjusting the Size and Shift of the Picture" on page 20 (E).

VPH-1292QMG MODEL ONLY

5 Adjust the picture.

6 To turn the power off, press the POWER OFF key on the remote control or on the control panel of the projector, then turn the MAIN POWER switch on the projector.

To remove the on-screen display

Press the STATUS OFF key.
PAGE display remains even when you press the STATUS OFF key.
To restore the on-screen display, press the STATUS ON key.

To turn off the picture

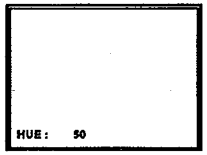
Press the PJ MUTING PIC key.
To restore the previous brightness level, press the PJ MUTING PIC key again or the CONTR + key.

Notes on projecting a picture input from the RGB IN connectors

Adjust the size and shift of the picture using the RGB SIZE/SHIFT key, RGB SIZE/SHIFT key and arrow keys, if necessary.
For details, see "Adjusting the Size and Shift of the Picture" on page 20 (E).

Adjusting the Picture

Use the PICTURE CONTROL keys on the remote control.
The adjustment levels are displayed on the screen having a range of MIN, 1, 2. . . , 98, 99, MAX.



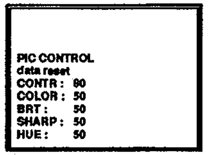
HUE : 50

CONTR +/– keys	+: Increases picture contrast. –: Decreases picture contrast.
COLOR +/– keys	+: Increases color intensity. –: Decreases color intensity.
BRT +/– keys	+: Makes the picture brighter. –: Makes the picture darker.
SHARP +/– keys	+: Makes the picture sharper. –: Makes the picture softer.
HUE +/– keys	+: Makes skin tones greenish. –: Makes skin tones purplish.

- The COLOR, SHARP, and HUE controls do not function on pictures input from the RGB IN connectors.
- The HUE control does not function with the PAL or SECAM color source.

To reset the picture settings to the factory preset levels

Press the RESET key.
The factory preset levels will be displayed on the screen.



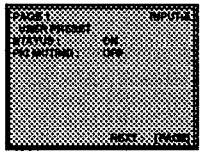
PIC CONTROL
data reset
CONTR : 80
COLOR : 50
BRT : 50
SHARP : 50
HUE : 50

Displaying the Current Control Settings and Conditions

Press the PAGE key to display the following four on-screen displays. You can adjust the parameters on PAGE 1, 2, or 3.
The display changes in the following order every time you press the PAGE key:

→ PAGE 1 → PAGE 2 → PAGE 3 → PAGE 4 → Original screen

PAGE 1

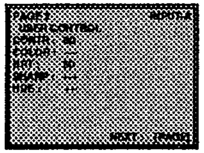


PAGE 1 INPUT-A
USER PRESET
STATUS : ON
PIC MUTING : OFF
NEXT [PAGE]

STATUS: ON/OFF
The setting is stored even when the power is turned off. If the on-screen display does not appear, check that STATUS ON is displayed.

PIC MUTING: ON/OFF
Whenever the power is turned on, PIC MUTING is set to OFF. If the picture does not appear, check that PIC MUTING is set to ON.

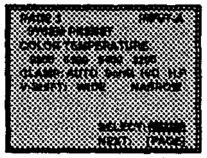
PAGE 2



PAGE 2 INPUT-A
USER CONTROL
CONTR : 80
COLOR : —
BRT : 50
SHARP : —
HUE : —
NEXT [PAGE]

Picture settings; contrast, color, brightness, sharpness, and hue level are displayed.
The levels can be changed independently for the signal input from different input connectors. (You can check from the message displayed in the upper right corner of the screen.)
"—" indicates that the control does not function with the current input signal. (In this case, the input signal is RGB.)
To change the levels, use the PICTURE CONTROL key.

PAGE 3



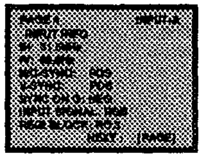
The color temperature, clamp, and V-shift adjustment mode settings are displayed.
The selected item blinks in green.
To change the setting, adjust by pressing ◀,▶, ▲ and ▼ keys.

COLOR TEMPERATURE: 9300/6500/5400/3200
Select the appropriate color temperature according to your application and the picture source.
The color temperature of the projector is preset to 6500 at the factory.

V-SHIFT: WIDE/NARROW
The V-shift of the projector is preset to WIDE at the factory. When some particular RGB signals are input to the projector, the picture may be distorted vertically. In this case, set to NARROW. Adjustable range in the lower direction will become narrow.
If the horizontal frequency of the input signal is above 100 kHz, the V-SHIFT is automatically set to NARROW.
For details of the clamp setting, see "Correcting the Luminance of the Picture – Clamp Setting" on page 24 (E).

Note
"CLAMP" and "V-SHIFT" are not displayed when the input signal is video.

PAGE 4



The signal input conditions are displayed.
fH: Horizontal frequency of the input signal
fV: Vertical frequency of the input signal

You can confirm "POS (positive)" or "NEG (negative)" for following settings:
("—" indicates that no synchronization signal is input to the projector.)
H/C-SYNC: Polarity of the H/C-SYNC
V-SYNC: Polarity of the V-SYNC
SYNC ON G: Polarity of the SYNC on the Green

- When POS (NEG) is displayed in green:
  The picture is being projected using its sync signal.
- When POS (NEG) is displayed in white:
  The picture is being projected without using its sync signal.

INPUT SIGNAL: Current input signal
  Y/C: S video input signal from the optional IFB-1000 (when installing the optional IFB-1000 to the projector)
  RGB: RGB input signal
  NTSC: NTSC input signal from the optional IFB-1000 (when installing the optional IFB-1000 to the projector)
  PAL: PAL input signal from the optional IFB-1000 (when installing the optional IFB-1000 to the projector)
  SECAM: SECAM input signal from the optional IFB-1000 (when installing the optional IFB-1000 to the projector)
  B & W: Black and white input signal from the optional IFB-1000 (when installing the optional IFB-1000 to the projector)
  Internal oscillation: Internal oscillation mode (No signal is input.)
  IDTV: Input signal from the optional IFB-3000 (when installing the optional IFB-3000 to the projector)
  HDTV: Input signal from the optional IFB-1300 (when installing the optional IFB-1300 to the projector)
  COMPONENT: Input signal from the optional IFB-1200 (when installing the optional IFB-1200 to the projector)

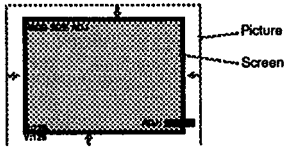
REGI BLOCK: The registration memory block number to which the input signal is assigned.

Adjusting the Size and Shift of the Picture

If necessary, adjust the size and shift of the picture using the RGB SIZE/SHIFT and arrow keys.
You can also adjust the size of the picture input from the connectors of the IFB-1000 using the RGB SIZE and arrow keys. You cannot adjust the shift of the picture input from the connectors of the IFB-1000.
If you wish to store the current adjustment setting, press the MEMORY key. (*For details, see "Storing the Setting Levels" on page 22 (E).*)
After the setting is stored in the memory, the display disappears.

RGB/VIDEO SIZE adjustment

If the size of the picture does not fit the screen, adjust RGB SIZE.
In this case, the RGB signal is input.

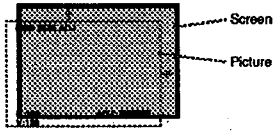


1 Press the RGB SIZE key.

2 Adjust by pressing the arrow keys until the picture fits the screen.
◀: Reduces horizontal size.
▶: Expands horizontal size.
▲: Expands vertical size.
▼: Reduces vertical size.

RGB SHIFT adjustment

If the RGB picture needs to be shifted on the screen, adjust RGB SHIFT.



1 Press the RGB SHIFT key.

2 Adjust by pressing the arrow keys so that the picture fits the screen.

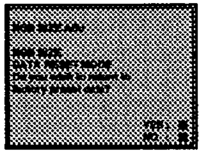
The picture shifts according to the direction of the arrow.

Resetting the Size/Shift to the Factory Preset Condition

1 Press the RGB SIZE or SHIFT key.

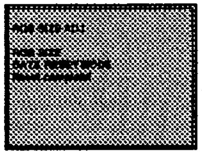
2 Press the ◀ and ▶ keys simultaneously.

The following on-screen display appears on the screen.
(eg. To reset the RGB SIZE to the factory preset condition)



3 Press the ▲ key.

The following on-screen display appears on the screen to confirm that resetting has been completed.
To keep the current setting instead of resetting, press the ▼ key.

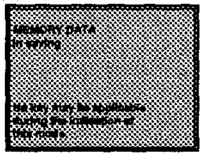


Storing the Setting Levels

If you wish to store the adjusted settings, you can store them in memory.
The following settings can be stored:

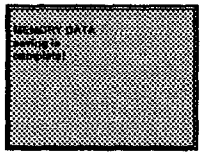
- COLOR TEMPERATURE, CLAMP, and V-SHIFT adjustment settings on PAGE 3
- VIDEO and RGB SIZE adjustment levels
- RGB SHIFT adjustment level

After the adjustment, press the MEMORY key.
The following on-screen display appears and storing starts. While the display is on, no other key will function.



MEMORY DATA
in saving

The following on-screen display appears to confirm that the setting adjustment has been completed.



MEMORY DATA

Screen Messages

Color codes

Four colors are used in the letters of on-screen display.

Color	Meaning
Green	Function and condition, item being selected on PAGE display
Cyan	Operating guide and messages
Yellow	Caution and error messages
White	Item being adjusted, item not being selected on PAGE display

Error Messages

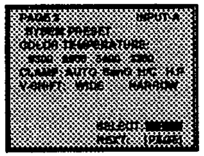
When an error occurs, the following messages will appear.

Messages	Meaning
Not applicable!	The key does not function in the current mode.
PIC MUTING	Picture muting mode is on. If you wish to adjust the picture controls, press the PJ MUTING PIC key to cancel the PIC MUTING mode.
Overflow!	The setting is outside the adjustable range limits.
NO INPUT	No signal has been received.
OFF	On-screen display STATUS is set to OFF. To restore the on-screen display, press the STATUS ON key.

Correcting the Luminance of the Picture – Clamp Setting

Clamp is used as a standard for setting the black level of the picture correctly. The standard position of the clamp depends on the kind of the sync signal. Normally, the CPU judges the signal and sets the clamp position automatically.
However, the CPU may misjudge the signal because of noise.
If the luminance of the picture seems to be incorrect, (too dark, the black color is too light, or the luminance is unstable) the clamp position may need to be changed.
Change the clamp position following the procedure below.

1 Press the PAGE key repeatedly until the PAGE 3 appears.



2 Select the clamp position by pressing the ◀, ▶, ▲ and ▼ keys.
AUTO: Automatic setting mode. Normally, set to this position.
S on G: If the black color is too light or seems to be green, set to this position.
H/C: If the picture is too dark or the luminance is unstable, set to this position.
H. P: If the luminance is still incorrect after changing the clamp setting to "S on G" or "H/C", set to this position and perform H-SHIFT adjustment.

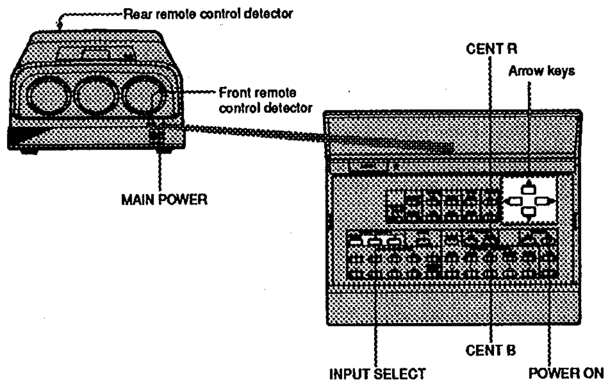
3 Press the MEMORY key to store the adjustment data.

If the luminance is still incorrect after changing the clamp setting

There may be a problem with the input signal or the connection.
Check the input signal.

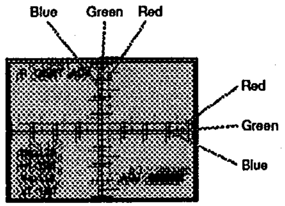
Centering Adjustment

The three colors, red, green, and blue must converge for correct projection.
If they do not converge, centering adjustment is necessary.



1 Turn the projector on by switching on the MAIN POWER switch and pressing the POWER ON key of the remote control.

2 Press the CENT R key.
The built-in cross-hair test pattern appears and the red line will be adjustable.

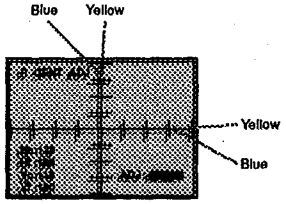


(Continued)

Centering Adjustment

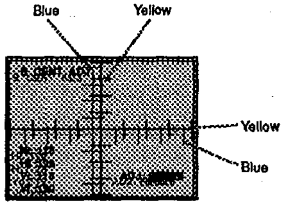
3 Press the arrow keys to move the red line until the red and green lines converge and become yellow.

The red line moves according to the direction of the arrow.



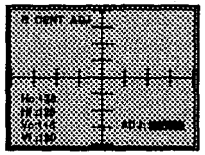
4 Press the CENT B key.

The blue line will be adjustable.



5 Press the arrow keys to move the blue line until the blue and yellow lines converge.

When all three color lines converge, the test pattern will become white.



6 Press the MEMORY key.

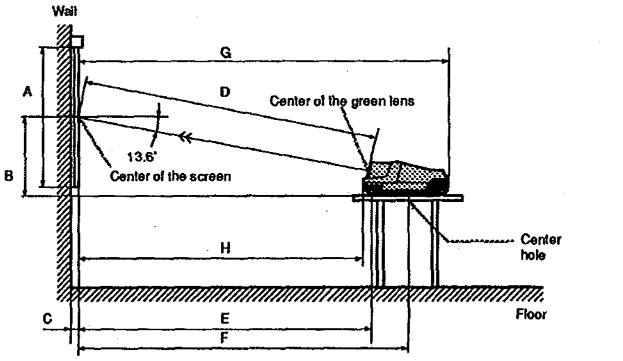
The normal display is restored.

Installation Diagrams

Installation and preliminary adjustments should be carried out by Qualified Sony Personnel.

Installation 1 Floor, Flat Screen

Be sure that the projector is parallel to the floor.



E: Horizontal distance between the center of the screen and the center of the green lens
B: Difference in height between the projector's bottom surface and the center of the screen
Tolerance in length
B: ±5%
Other measurements: 0% to +5%

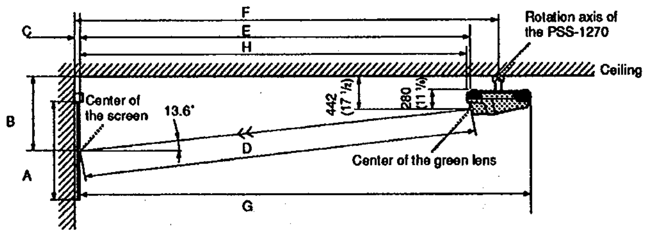
Unit:mm (inches)

Screen size (inches)	90	100	120	150	180	200	250	300
A (Vsize)	1372 (54 1/8)	1524 (60)	1829 (72 1/8)	2286 (90)	2743 (108)	3048 (120)	3810 (150)	4572 (180)
B (Hcent)	886 (35)	947 (37 3/8)	1071 (42 1/4)	1285 (50 5/8)	1485 (58 1/2)	1618 (63 3/4)	1939 (76 3/8)	2284 (90)
C (Width)		28[a] (1 1/8)	32[b] (15/16)					
D (TD)	2587 (101 7/8)	2847 (112 1/8)	3373 (132 7/8)	4285 (168 3/4)	5137 (202 1/4)	5702 (224 1/2)	7065 (278 1/4)	8533 (336)
E (Xlens)	2514 (99)	2767 (109)	3278 (129 1/8)	4165 (164)	4993 (196 5/8)	5542 (218 1/4)	6867 (270 3/8)	8294 (326 5/8)
F (LHole)	2762 (108 3/4)	3015 (118 3/4)	3526 (138 7/8)	4412 (173 3/4)	5240 (206 3/8)	5790 (228)	7114 (280 1/8)	8541 (336 3/8)
G (Lmax)	3446 (135 3/4)	3699 (145 3/4)	4210 (165 7/8)	5097 (200 3/4)	5925 (233 3/8)	6474 (255)	7799 (307 1/8)	9226 (363 1/4)

[a] Sony VPS-100FH
[b] Sony VPS-120FH

Installation Diagrams

Installation 2 Ceiling, Flat Screen


F
E
H
C
B
A
D
G
Rotation axis of the PSS-1270
Ceiling
Center of the screen
13.6°
442 (17 1/2)
280 (11 1/8)
Center of the green lens
Wall

E: Horizontal distance between the center of the screen and the center of the green lens
Tolerances
B: ±5%
Other measurements: 0% to +5%
Unit: mm (inches)

Unit: mm (inches)

Screen size (inches)	90	100	120	150	180	200	250	300
A (Vsize)	1372 (54 1/8)	1524 (60)	1829 (72 1/8)	2286 (90)	2743 (108)	3048 (120)	3810 (150)	4572 (180)
B (Hcent)	1048 (41 3/8)	1109 (43 3/4)	1233 (48 5/8)	1447 (57)	1647 (64 7/8)	1780 (70 1/8)	2101 (82 3/4)	2446 (96 3/8)
C (Width)		28[a] (1 1/8)	32[b] (1 5/16)					
D (TD)	2587 (101 7/8)	2847 (112 1/8)	3373 (132 7/8)	4285 (168 3/4)	5137 (202 1/4)	5702 (224 1/2)	7065 (278 1/4)	8533 (336)
E (Xlens)	2514 (99)	2767 (109)	3278 (129 1/8)	4165 (164)	4993 (196 5/8)	5542 (218 1/4)	6867 (270 3/8)	8294 (326 5/8)
F (LHole)	2787 (109 3/4)	3040 (119 3/4)	3551 (139 7/8)	4437 (174 3/4)	5265 (207 3/8)	5815 (229)	7139 (281 1/8)	8566 (337 1/4)
G (Lmax)	3446 (135 3/4)	3699 (145 3/4)	4210 (165 7/8)	5097 (200 3/4)	5925 (233 3/8)	6474 (255)	7799 (307 1/8)	9226 (363 1/4)

[a] Sony VPS-100FH
[b] Sony VPS-120FH

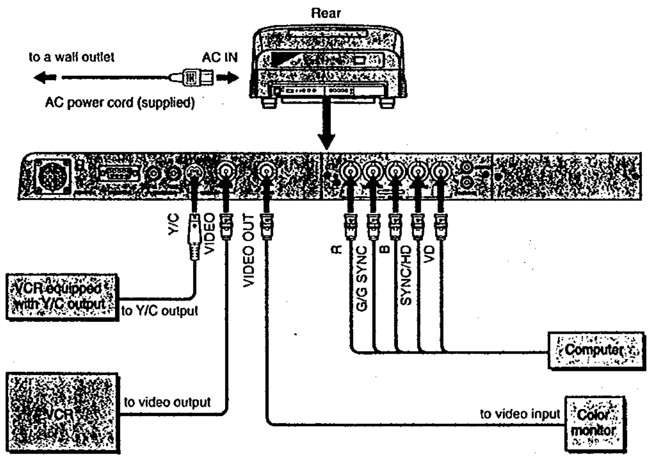
VPH-1292Q/QM MODEL ONLY

System Connections

Notes on connection

- First make sure that the power to each piece of equipment is turned off.
- Use appropriate cables for connecting the equipment.
- Cable connectors should be fully inserted into the jacks. A loose connection may cause hum and noise.
- To disconnect a cable, pull it out by the plug. Never pull the cable itself.
- Read the Operating Instructions of the equipment to be connected.

Connecting Directly to the Projector


Rear
to a wall outlet
AC IN
AC power cord (supplied)
Y/C
VIDEO
VIDEO OUT
R
G/G SYNC
B
SYNC/HD
VD
VCR equipped with Y/C output
to Y/C output
VCR
to video output
Computer
to video input
Color monitor

Notes

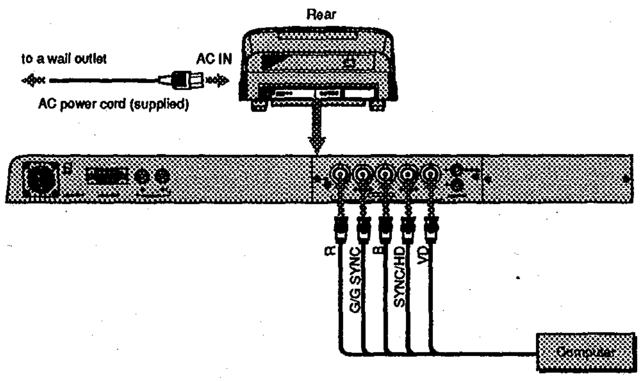
- The VIDEO connector is disconnected automatically when a cable is connected to the Y/C connector.
- The external sync signal has priority over the internal sync signal. However, when the external sync signal is not stable, the internal sync signal has priority.
- Do not project a still picture from a computer or video disc player for more than an hour.
- The dimensions of the character display area may vary or the picture may not be centered, depending on the computer being used. This does not mean that there is a fault in the projector.
- If your computer is equipped with a composite video output, connect it to the VIDEO IN connector on the projector.
- If necessary, adjust the size and shift of the picture using the RGB SIZE/SHIFT keys and arrow keys.
For details, see "Adjusting the Size and Shift of the Picture" on page 20 (E).

VPH-1292QMG MODEL ONLY

System Connections

Notes on connection
- First make sure that the power to each piece of equipment is turned off.
- Use appropriate cables for connecting the equipment.
- Cable connectors should be fully inserted into the jacks. A loose connection may cause hum and noise.
- To disconnect a cable, pull it out by the plug. Never pull the cable itself.
- Read the Operating Instructions of the equipment to be connected.

Connecting Directly to the Projector


Rear
to a wall outlet
AC IN
AC power cord (supplied)
R
G/G SYNC
B
SYNC/HD
VD
Computer

Notes
- The external sync signal has priority over the internal sync signal. However, when the external sync signal is not stable, the internal sync signal has priority.
- Do not project a still picture from a computer or video disc player for more than an hour.
- The dimensions of the character display area may vary or the picture may not be centered, depending on the computer being used. This does not mean that there is a fault in the projector.
- If necessary, adjust the size and shift of the picture using the RGB SIZE/SHIFT keys and arrow keys.
  For details, see "Adjusting the Size and Shift of the Picture" on page 20 (E).

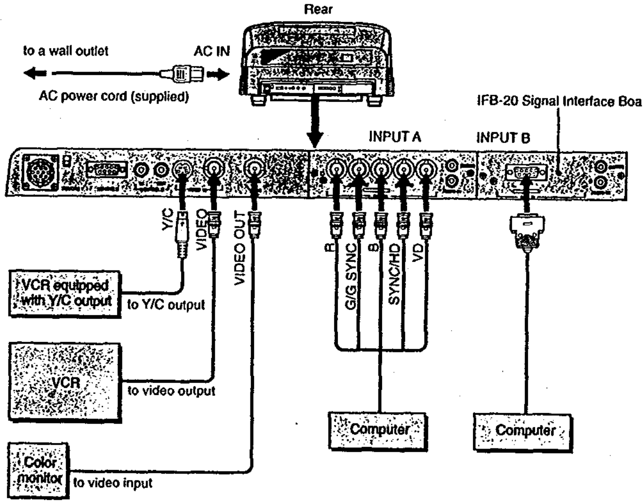
VPH-1292Q/QM MODEL ONLY

System Connections

Using an Interface Board

Use the optional IFB-11/20/30/1000/1200 or 1300 interface board to expand system connectivity.

Example: Using the IFB-20 Signal Interface Board


Rear
to a wall outlet
AC IN
AC power cord (supplied)
IFB-20 Signal Interface Board
INPUT A
INPUT B
Y/C
VIDEO
VIDEO OUT
R
G/G SYNC
B
SYNC/HD
VD
VCR equipped with Y/C output
to Y/C output
VCR
to video output
Color monitor
to video input
Computer
Computer

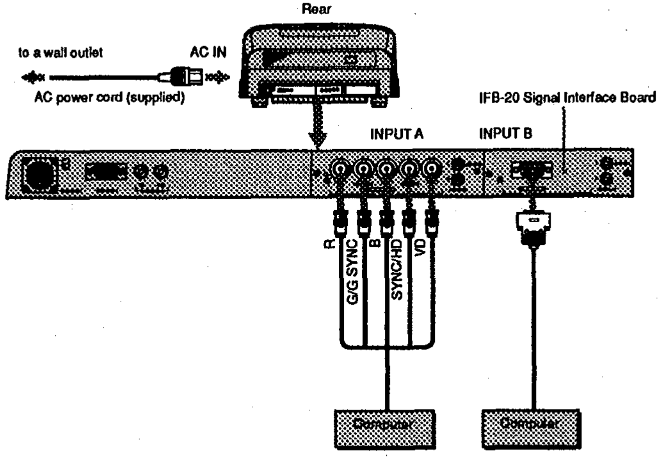
When installing an interface board, consult Qualified Service Personnel.

System Connections

Using an Interface Board

Use the optional IFB-11/20/30/1000/1200 or 1300 interface board to expand system connectivity.

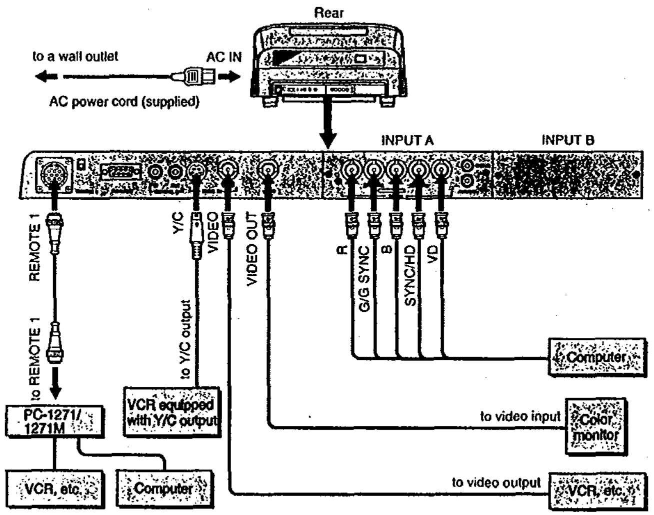
Example: Using the IFB-20 Signal Interface Board


Rear
to a wall outlet
AC IN
AC power cord (supplied)
IFB-20 Signal Interface Board
INPUT A
INPUT B
R
G/G SYNC
B
SYNC/HD
VD
Computer
Computer

When installing an interface board, consult Qualified Service Personnel.

Using the Switcher

Use the optional PC-1271/1271M Signal Interface Switcher for connecting multiple video equipment. The input is selected by pressing the SWITCHER/INDEX keys on the remote control or the SWITCHER keys on the control panel of the projector.

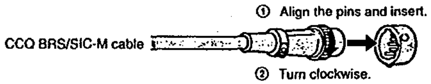

Rear
to a wall outlet
AC IN
AC power cord (supplied)
INPUT A
INPUT B
REMOTE 1
Y/C
VIDEO
VIDEO OUT
R
G/G SYNC
B
SYNC/HD
VD
to REMOTE 1
to Y/C output
Computer
PC-1271/1271M
VCR equipped with Y/C output
to video input
Color monitor
to video output
VCR, etc.
VCR, etc.
Computer

The equipment can be connected to the VIDEO IN, INPUT A and B connectors of the projector even when the switcher is connected.

Using the SWITCHER/INDEX keys on the remote control or the SWITCHER keys on the control panel of the projector

When using the remote control, set the SWITCHER/INDEX select switch to SWITCHER. Press a number key between 1 and 8 to select the input number of the switcher. When two switchers are connected, use the SECOND key. To control the second switcher (SINGLE/SECOND/OTHER switch on the switcher is set to SECOND), first press the SECOND key and then a number key.

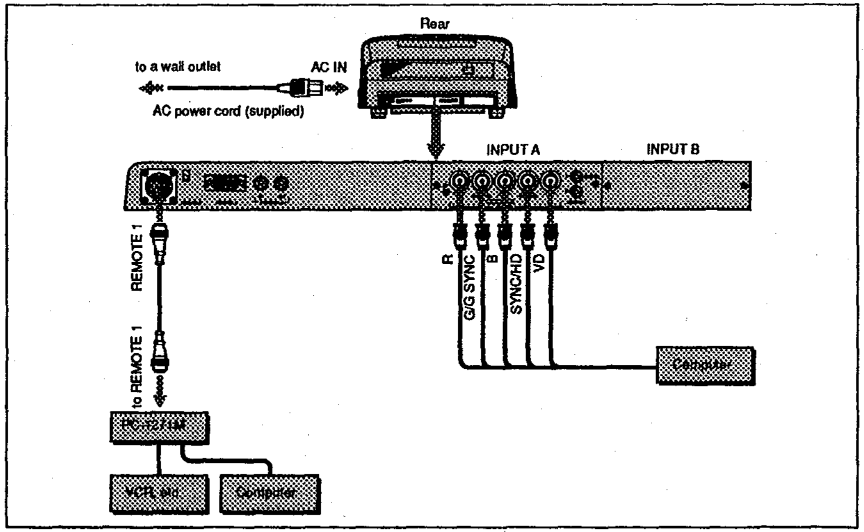
14-pin connector


① Align the pins and insert.
CCQ BRS/SIC-M cable
② Turn clockwise.

VPH-1292QMG MODEL ONLY

Using the Switcher

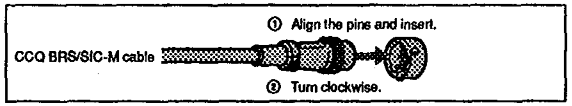
Use the optional PC-1271M Signal Interface Switcher for connecting multiple video equipment. The input is selected by pressing the SWITCHER/INDEX keys on the remote control or the SWITCHER keys on the control panel of the projector.


Rear
to a wall outlet
AC IN
AC power cord (supplied)
INPUT A
INPUT B
REMOTE 1
to REMOTE 1
R
G/G SYNC
B
SYNC/HD
VD
Computer
PC-1271M
VCR, etc
Computer

The equipment can be connected to the INPUT A and B connectors of the projector even when the switcher is connected.

Using the SWITCHER/INDEX keys on the remote control or the SWITCHER keys on the control panel of the projector
When using the remote control, set the SWITCHER/INDEX select switch to SWITCHER. Press a number key between 1 and 8 to select the input number of the switcher. When two switchers are connected, use the SECOND key. To control the second switcher (SINGLE/SECOND/OTHER switch on the switcher is set to SECOND), first press the SECOND key and then a number key.

14-pin connector

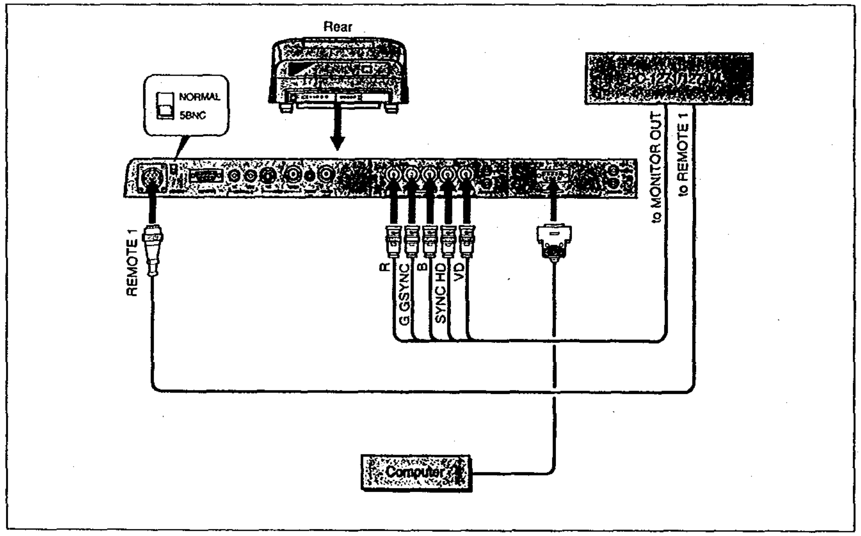

CCQ BRS/SIC-M cable
① Align the pins and insert.
② Turn clockwise.

VPH-1292Q/QM MODEL ONLY

System Connections

When Projecting the High Resolution Pictures

When projecting the video signal which is above 70 MHz such as the computer graphics (CG), you should set the projector to the high resolution mode by switching the 5BNC switch.
To set the projector to the high resolution mode, set the 5BNC switch on the rear panel of the projector to 5BNC.
Then, connect the RGB IN connectors of the projector and the MONITOR OUT connectors of the switcher with five BNC cable.

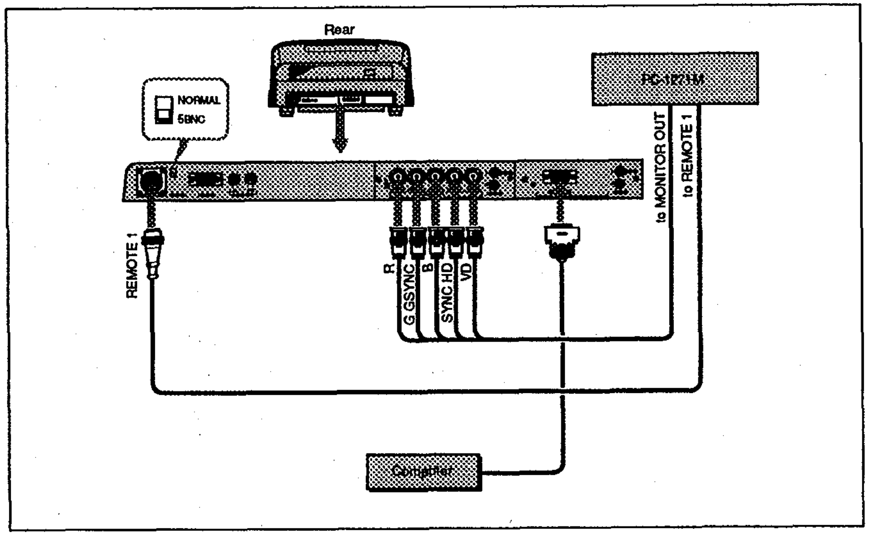

Rear
NORMAL
5BNC
REMOTE 1
R
G GSYNC
B
SYNC HD
VD
PC-1271M
to MONITOR OUT
to REMOTE 1
Computer

VPH-1292QMG MODEL ONLY

System Connections

When Projecting the High Resolution Pictures

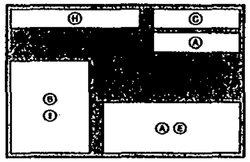
When projecting the video signal which is above 70 MHz such as the computer graphics (CG), you should set the projector to the high resolution mode by switching the 5BNC switch.
To set the projector to the high resolution mode, set the 5BNC switch on the rear panel of the projector to 5BNC.
Then, connect the RGB IN connectors of the projector and the MONITOR OUT connectors of the switcher with five BNC cable.



VPH-1292Q/QM MODEL ONLY

List of Messages

Use the list below to check the meaning of the messages displayed on the screen.
The list is divided into sections depending on the location which the message appears. First check the location in the following diagram, then refer to the alphabetic listing to find the message.



Ⓓ, Ⓕ, Ⓖ and Ⓙ listed below appear all over the screen.

A Caution messages

• **Not applicable!**	• The key does not function in the current mode.
• **Overflow!**	• The setting is outside the adjustable range limits.
• **PIC MUTING**	• Picture muting mode is on.
• **Input is not VIDEO.**	• The input signal is not VIDEO.
• **Input is not NTSC.**	• The input signal is not NTSC.
• **Input is not RGB.**	• The input signal is not RGB.
• **Input is B & W.**	• The input signal is black and white.
• **OFF**	• On-screen display STATUS is set to OFF.
• **NO INPUT**	• No signal has been received.

B PIC CONTROL data

• **CONTR (CONTRAST)**	• Contrast
• **COLOR**	• Color
• **BRT (BRIGHTNESS)**	• Brightness
• **SHARP (SHARPNESS)**	• Sharpness
• **HUE**	• Hue
• **PIC CONTROL data reset**	• Resets the PIC CONTROL data.

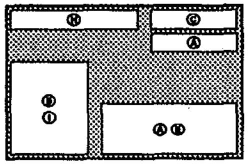
C Input signal

• **VIDEO**	• Input from VIDEO IN
• **INPUT-A**	• Input from RGB IN
• **INPUT-B**	• Input from an optional interface board
• **SW'ER x-y (switcher x=1-2, y=1-8)**	• Input from an optional switcher
• **ID No. xx**	• The ID number of the optional IFB-101 (when the IFB-101 is installed)
• **OTHER**	• An optional switcher is in the OTHER mode.

VPH-1292QMG MODEL ONLY

List of Messages

Use the list below to check the meaning of the messages displayed on the screen.
The list is divided into sections depending on the location which the message appears. First check the location in the following diagram, then refer to the alphabetic listing to find the message.



Ⓓ, Ⓕ, Ⓖ and Ⓙ listed below appear all over the screen.

Ⓐ Caution messages

• **Not applicable!**	• The key does not function in the current mode.
• **Overflow!**	• The setting is outside the adjustable range limits.
• **PIC MUTING**	• Picture muting mode is on.
• **Input is not VIDEO.**	• The input signal is not VIDEO.
• **Input is not NTSC.**	• The input signal is not NTSC.
• **Input is not RGB.**	• The input signal is not RGB.
• **Input is B & W.**	• The input signal is black and white.
• **OFF**	• On-screen display STATUS is set to OFF.
• **NO INPUT**	• No signal has been received.

Ⓑ PIC CONTROL data

• **CONTR (CONTRAST)**	• Contrast
• **COLOR**	• Color
• **BRT (BRIGHTNESS)**	• Brightness
• **SHARP (SHARPNESS)**	• Sharpness
• **HUE**	• Hue
• **PIC CONTROL data reset**	• Resets the PIC CONTROL data.

Ⓒ Input signal

• **INPUT-A**	• Input from RGB IN
• **INPUT-B**	• Input from an optional interface board
• **SW'ER x-y (switcher x=1-2, y=1-8)**	• Input from an optional switcher
• **ID No. xx**	• The ID number of the optional IFB-101 (when the IFB-101 is installed)
• **OTHER**	• An optional switcher is in the OTHER mode.

VPH-1292Q/QM MODEL ONLY

List of Messages

Ⓓ PAGE

Subtitle

• **USER PRESET**	• User preset
• **USER CONTROL**	• User control
• **SYSTEM PRESET**	• System preset
• **INPUT INFO (INPUT INFORMATION)**	• Input information

PAGE 1

• **STATUS ON/OFF**	• On-screen display on/off
• **PIC MUTING ON/OFF**	• Picture muting mode on/off

PAGE 2

• **CONTR (CONTRAST)**	• Contrast
• **COLOR**	• Color
• **BRT (BRIGHTNESS)**	• Brightness
• **SHARP (SHARPNESS)**	• Sharpness
• **HUE**	• Hue
• **PIC CONTROL data reset**	• Resets the PIC CONTROL data.

PAGE 3

• **COLOR TEMPERATURE 9300/6500/5400/3200**	• Color temperature is set to 9300/6500/5400/3200 manually adjusted by Qualified Sony Service Personnel.
• **CLAMP: AUTO / S on G / H/C / H. P**	• Clamp position is set to automatic/internal/external sync signal/ horizontal deflection pulse position.
• **V-SHIFT: WIDE/NARROW**	• The adjustable range of vertical shift is wide/narrow.

PAGE 4

• **INPUT SIGNAL**	• Input signal
• **Y/C**	• S video input signal from VIDEO IN
• **RGB**	• RGB input signal
• **NTSC**	• NTSC input signal from VIDEO
• **PAL**	• PAL input signal from VIDEO IN
• **SECAM**	• SECAM input signal from VIDEO IN
• **B & W**	• Black and white input signal from VIDEO IN
• **IDTV**	• IDTV input signal from the IFB-3000
• **HDTV**	• HDTV input signal from the IFB-1300
• **COMPONENT**	• COMPONENT input signal from the IFB-1200
• **fH**	• Horizontal frequency
• **fV**	• Vertical frequency
• **Internal oscillation**	• Internal oscillation mode (No signal is input.)

List of Messages

D PAGE

Subtitle

• USER PRESET	• User preset
• USER CONTROL	• User control
• SYSTEM PRESET	• System preset
• INPUT INFO (INPUT INFORMATION)	• Input information

PAGE 1

• STATUS ON/OFF	• On-screen display on/off
• PIC MUTING ON/OFF	• Picture muting mode on/off

PAGE 2

• CONTR (CONTRAST)	• Contrast
• COLOR	• Color
• BRT (BRIGHTNESS)	• Brightness
• SHARP (SHARPNESS)	• Sharpness
• HUE	• Hue
• PIC CONTROL data reset	• Resets the PIC CONTROL data.

PAGE 3

• COLOR TEMPERATURE 9300/6500/5400/3200	• Color temperature is set to 9300/6500/5400/3200 manually adjusted by Qualified Sony Service Personnel.
• CLAMP: AUTO / S on G / H/C / H. P	• Clamp position is set to automatic/internal/external sync signal/ horizontal deflection pulse position.
• V-SHIFT: WIDE/NARROW	• The adjustable range of vertical shift is wide/narrow.

PAGE 4

• INPUT SIGNAL	• Input signal
• Y/C	• S video input signal from the IFB-1000
• RGB	• RGB input signal
• NTSC	• NTSC input signal from the IFB-1000
• PAL	• PAL input signal from the IFB-1000
• SECAM	• SECAM input signal from the IFB-1000
• B & W	• Black and white input signal from the IFB-1000
• IDTV	• IDTV input signal from the IFB-3000
• HDTV	• HDTV input signal from the IFB-1300
• COMPONENT	• COMPONENT input signal from the IFB-1200
• fH	• Horizontal frequency
• fV	• Vertical frequency
• Internal oscillation	• Internal oscillation mode (No signal is input.)

• H/C-SYNC	• Horizontal sync signal or composite sync signal
• V-SYNC	• Vertical sync signal
• SYNC ON G	• Composite sync signal
• H/C-SYNC: POS/NEG/---	• The polarity of the H/C-SYNC is positive/negative/not input.
• V-SYNC: POS/NEG/---	• The polarity of the V-SYNC is positive/negative/not input.
• SYNC ON G:NEG/---	• The polarity of the SYNC ON G is negative/not input.
• REGI BLOCK: No. x	• The input signal is grouped into the registration memory block No. x.

E Operation

• YES: ▲	• Press ▲ for "Yes".
• NO: ▼	• Press ▼ for "No".
• SELECT: ◀ ▶	• Press ◀ or ▶ key to select.
• SELECT: ◀ ▶ ▲ ▼	• Press ◀, ▶, ▲ or ▼ key to select.
• ADJ: ◀ ▶ ▲ ▼	• Press ◀, ▶, ▲ or ▼ key to adjust.
• ADJ: ◀ ▶	• Press ◀ or ▶ key to adjust.
• ADJ: ▲ ▼	• Press ▲ or ▼ key to adjust.
• NEXT: [PAGE]	• Press PAGE key to go to the next page.
• EXIT: [PAGE]	• Press PAGE key to exit the PAGE mode.
• ENTER: ▶	• Press ▶ key to execute the selected item.
• ENTER: ▲	• Press ▲ key to execute the selected item.
• CANCEL: ▼	• Press ▼ key to cancel the setting.

F Memory data

• MEMORY DATA in saving	• Saving data in memory
• MEMORY DATA saving is complete!	• Saving data in memory is completed.
• No key may be applicable during the indication of this mode	• When in this mode (MEMORY DATA saving), no key functions.

G Data reset

• Do you wish to return to factory preset data?	• Do you wish to reset the data to the factory preset data?
• Do you wish to return to previously saved data?	• Do you wish to reset the data to the previously saved data?
• Reset complete!	• Resetting has been completed.
• RGB SIZE DATA RESET MODE	• RGB or video input size data resetting mode
• RGB SHIFT DATA RESET MODE	• RGB input shift data resetting mode

List of Messages

H Adjustment

• **RGB SIZE ADJ**	• RGB or video input size adjustment mode
• **RGB SHIFT ADJ**	• RGB input shift adjustment mode
• **R CENT ADJ**	• Red centering adjustment mode
• **B CENT ADJ**	• Blue centering adjustment mode

I Adjustment data

• **H: xxx**	• Horizontal adjustment level (xxx=MIN, 1, 2, ... 254, 255, MAX)
• **V: xxx**	• Vertical adjustment level (xxx=MIN, 1, 2, ... 254, 255, MAX)
• **Hf: xxx**	• Centering adjustment level for horizontal direction (xxx=MIN, 1, 2, ... 254, 255, MAX) Use the arrow keys to increment or decrement this number.
• **Hc: xxx**	• Centering adjustment level for horizontal direction (xxx=MIN, 1, 2, ... 254, 255, MAX) Use the arrow keys to increment or decrement this number.
• **Vf: xxx**	• Centering adjustment level for vertical direction (xxx=MIN, 1, 2, ... 254, 255, MAX) Use the arrow keys to increment or decrement this number.
• **Vc: xxx**	• Centering adjustment level for vertical direction (xxx=MIN, 1, 2, ... 254, 255, MAX) Use the arrow keys to increment or decrement this number.

J Others

• **For optimum performance, white screen will remain for 20 min. For immediate use, push [PAGE] key.**	• For optimum performance, white screen will remain for 20 min. For immediate use, press the PAGE key.

Index

A
Adjusting
  centering 25 (E)
  RGB SHIFT 20 (E)
  RGB/VIDEO picture size 20 (E)

B
Battery
  installation 12 (E)
  notes 12 (E)

C, D, E, F
Carrying the projector 8 (E)
Clamp setting 24 (E)
Connecting
  remote control to the projector 12 (E)
  to external equipment directly 29 (E)
  using the optional board 30 (E)
  using the optional switcher 31 (E)
  when projecting the high resolution pictures 32 (E)
Correcting the luminance of the picture 24 (E)

G, H
Grips 8 (E)
Handles 8 (E)

I, J, K
Initialization screen 13 (E)
Inserting the grips 8 (E)
Installation
  ceiling installation 28 (E)
  diagrams 27 (E), 28 (E)
  floor installation 27 (E)

L, M
List of messages 33 (E)

N, O
Notes
  for wireless remote control operation 11 (E)
  on batteries 12 (E)
  on projecting a picture input from the RGB IN connectors 15 (E)

P, Q
PAGE 1 17 (E)
PAGE 2 17 (E)
PAGE 3 18 (E)
PAGE 4 19 (E)
Precautions 4 (E)
Projection procedure 14 (E)

R
Removing
  grips 8 (E)
  on-screen display 15 (E)
Resetting
  picture settings to the factory preset levels 16 (E)
  size/shift to the factory preset condition 21 (E)

S
Screen messages
  color codes 23 (E)
  error messages 23 (E)
Side Handles 8 (E)
Storing the setting levels 22 (E)

T
Turning off the picture 15 (E)

U
Using the side handles 8 (E)

Installation Procedures

By default, this projector is adjusted for 120-inch front projection on the floor/desk. If you install the projector in other conditions, you have to change some settings. Therefore, installation procedures depend on the screen size or type, and installation method.

① Verify the conditions of installation, such as angle of optical axis, projection distance, height of the projector and screen.

⇓

② Adjust the ring spacers. *(page 18(E))*

⇓

③ Install the projector and screen. *(page 5(E))*

⇓

④ Reset the cross-hatch to factory setting. *(page 88(E))*

⇓

⑤ Adjust the CRT conversion angle. *(page 20(E))*

⇓

⑥ Change the polarity according to the projection patterns. *(page 22(E))*

⇓

⑦ Adjust the lens focus, magnetic focus and AQP (Axis Quadrupole) / DQP (Diagonal Quadrupole). *(page 48(E))*

⇓

⑧ Adjust the registrations. *(page 56(E))*

⇓

⑨ Connect other equipment. *(page 28(E))*

⇓

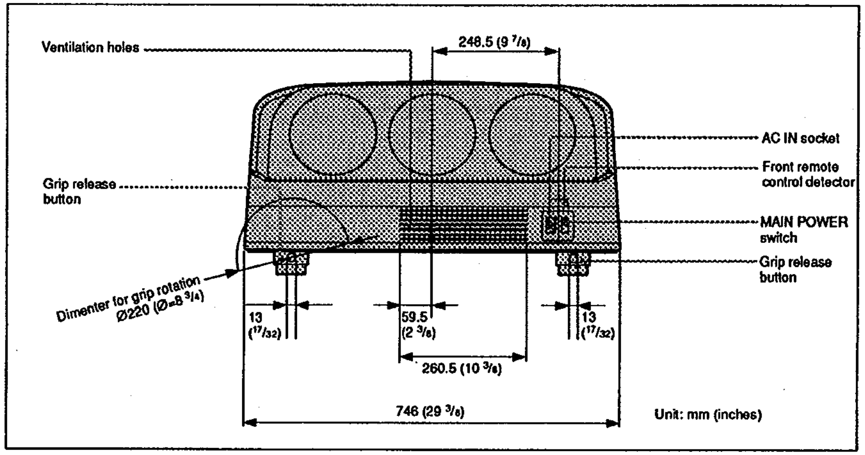
⑩ Adjust the each input signal.
  - Fine adjustment for the magnetic focus and registrations. *(pages 80(E) and 82(E))*
  - Adjust the size or shift of the picture. *(pages 81(E), 83(E) and 84(E))*
  - Adjust the blanking. *(pages 81(E) and 84(E))*

Installation Diagrams

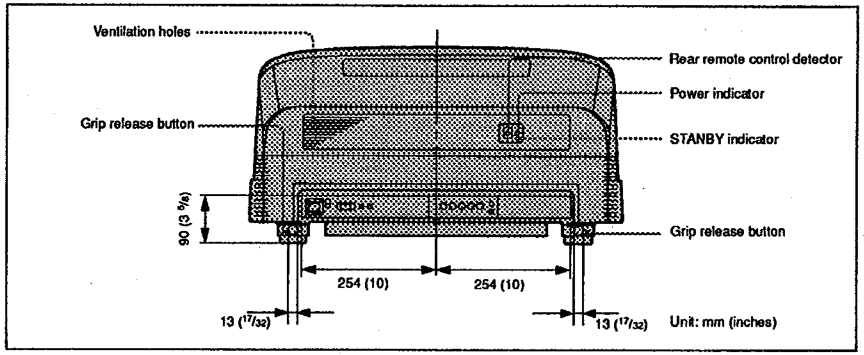
Necessary Clearance for Installation and Maintenance

When installing the projector, be sure to provide enough room for maintenance service, as illustrated below.

Front


Ventilation holes
248.5 (9 7/8)
AC IN socket
Front remote control detector
Grip release button
MAIN POWER switch
Grip release button
Dimenter for grip rotation Ø220 (Ø=8 3/4)
13 (17/32)
59.5 (2 3/8)
13 (17/32)
260.5 (10 3/8)
746 (29 3/8)
Unit: mm (inches)

Rear


Ventilation holes
Rear remote control detector
Power indicator
Grip release button
STANBY indicator
90 (3 9/16)
Grip release button
254 (10)
254 (10)
13 (17/32)
13 (17/32)
Unit: mm (inches)

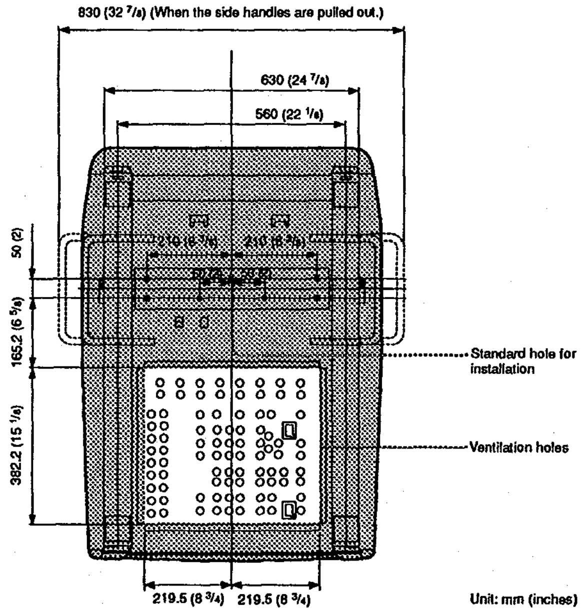
Installation Diagrams

Bottom

The center hole on the bottom surface is useful for reference when measuring for installation. For normal installation, use the seven holes to fix the projector.

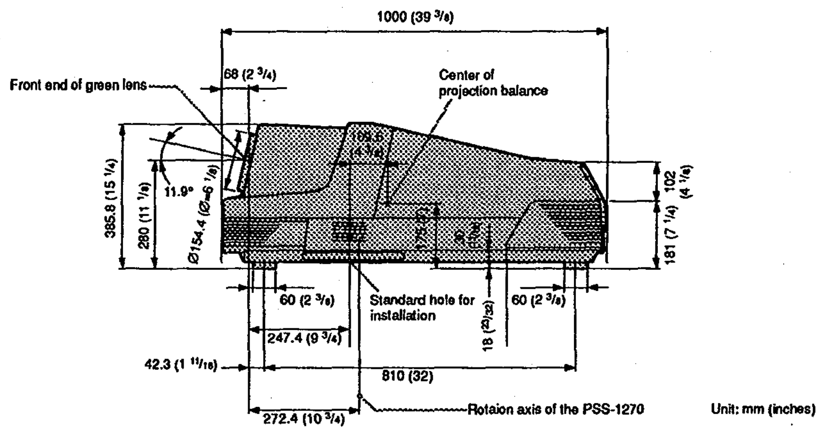
Note

Use only the M8 metric screws (38mm (1 1/2 inches) to 42mm (1 11/16 inches) long) for the attachment holes.
When using the optional PSS-1270 Projector Suspension Support, use the screws supplied with the projector.


830 (32 7/8) (When the side handles are pulled out.)
630 (24 7/8)
560 (22 1/8)
210 (8 3/8)
210 (8 3/8)
50 (2)
165.2 (6 5/8)
382.2 (15 1/8)
219.5 (8 3/4)
219.5 (8 3/4)
Standard hole for installation
Ventilation holes
Unit: mm (inches)

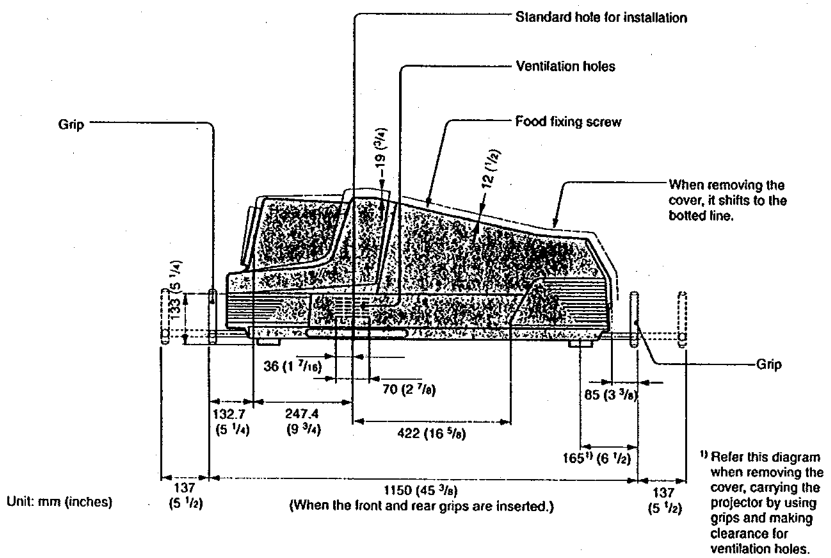
Side

Refer to the diagram below for installation.


1000 (39 3/8)
Front end of green lens
68 (2 3/4)
Center of projection balance
11.9°
Ø154.4 (Ø=6 1/8)
385.8 (15 1/4)
280 (11 1/8)
102 (4 1/8)
181 (7 1/4)
60 (2 3/8)
Standard hole for installation
18 (23/32)
60 (2 3/8)
247.4 (9 3/4)
42.3 (1 11/16)
810 (32)
272.4 (10 3/4)
Rotaion axis of the PSS-1270
Unit: mm (inches)

Installation Diagrams

Refer to the diagram below when removing the cover, carrying the projector with the grips and making clearance for the ventiration holes.


Standard hole for installation
Ventilation holes
Food fixing screw
Grip
19 (3/4)
12 (1/2)
When removing the cover, it shifts to the botted line.
133 (5 1/4)
Grip
36 (1 7/16)
70 (2 7/8)
85 (3 3/8)
132.7 (5 1/4)
247.4 (9 3/4)
422 (16 5/8)
165¹⁾ (6 1/2)
137 (5 1/2)
1150 (45 3/8) (When the front and rear grips are inserted.)
137 (5 1/2)

Unit: mm (inches)

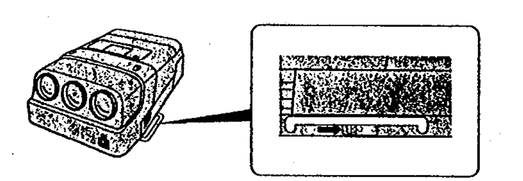
[1] Refer this diagram when removing the cover, carrying the projector by using grips and making clearance for ventilation holes.

Carrying the projector

You can carry the projector by using the handle.

Using the side handles

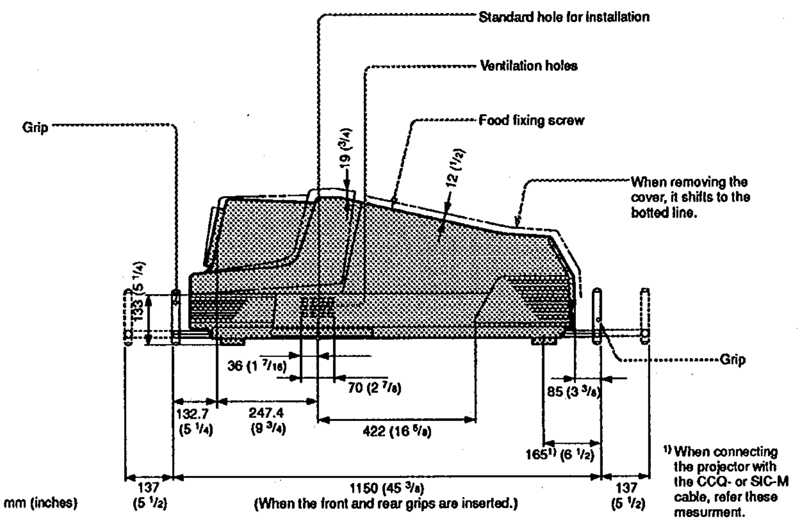
Pull out to use. To put away the side handle, slide it backward.



To put away the side handle, slide it backward.

Installation Diagrams

Refer to the diagram below when removing the cover, carrying the projector with the grips and making clearance for the ventiration holes.


Standard hole for installation
Ventilation holes
Food fixing screw
Grip
19 (3/4)
12 (1/2)
When removing the cover, it shifts to the botted line.
133 (5 1/4)
Grip
36 (1 7/16)
70 (2 7/8)
85 (3 3/8)
132.7 (5 1/4)
247.4 (9 3/4)
422 (16 5/8)
165¹⁾ (6 1/2)
137 (5 1/2)
1150 (45 3/8) (When the front and rear grips are inserted.)
137 (5 1/2)

Unit: mm (inches)

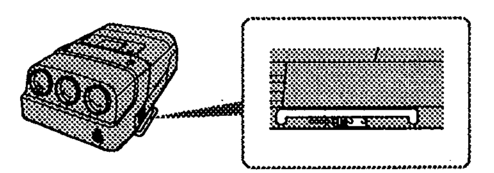
[1] When connecting the projector with the CCQ- or SIC-M cable, refer these mesurment.

Carrying the projector

You can carry the projector by using the handle.

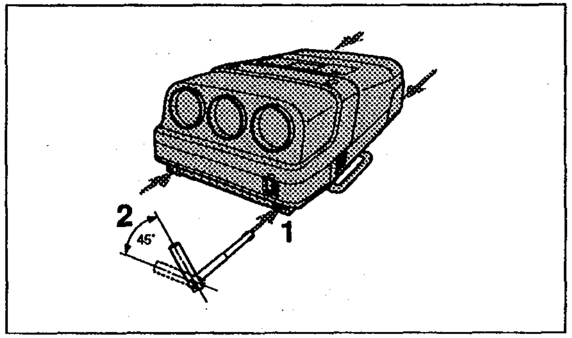
Using the side handles

Pull out to use. To put away the side handle, slide it backward.



To put away the side handle, slide it backward.

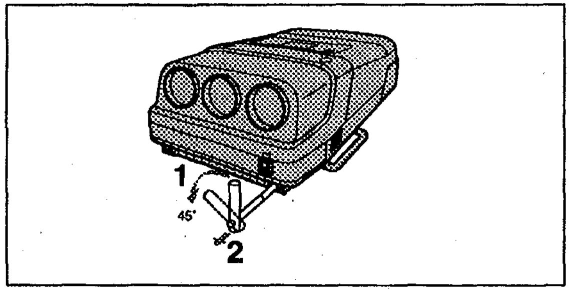
Inserting the front or rear grips



1 Insert the grip as illustrated above.

2 Turn the grip until it is fixed.

Removing the front or rear grips

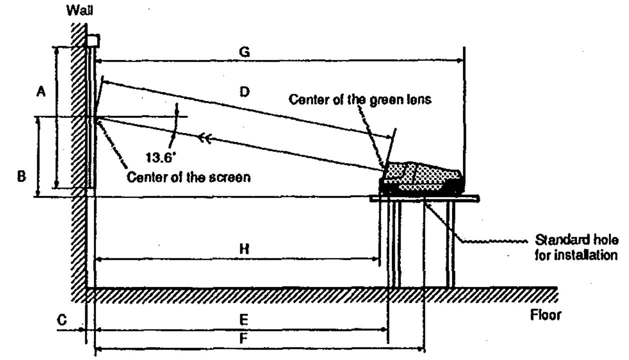


1 While pressing the grip release button, turn the grip until it is fixed.

2 Pull out the handle.

Floor Installation Using Front Projection Flat Screen

Be sure that the projector is level to the floor.



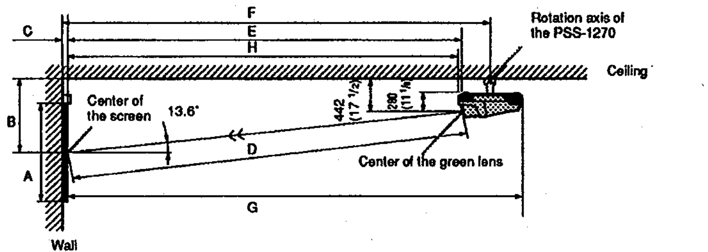
E: Horizontal distance between the center of the screen and the center of the green lens
B: Difference in height between the projector's bottom surface and the center of the screen
Tolerance in length
B: ±5%
Other measurements: 0% to +5%

Unit:mm (inches)

Screen size (inches)	90	100	120	150	180	200	250	300
A (Vsize)	1372 (54 1/8)	1524 (60)	1829 (72 1/8)	2286 (90)	2743 (108)	3048 (120)	3810 (150)	4572 (180)
B (Hcent)	886 (35)	947 (37 3/8)	1071 (42 1/4)	1285 (50 5/8)	1485 (58 1/2)	1618 (63 3/4)	1939 (76 3/8)	2284 (90)
C (Width)		28[a] (1 1/8)	32[b] (1 5/16)					
D (TD)	2587 (101 7/8)	2847 (112 1/8)	3373 (132 7/8)	4285 (168 3/4)	5137 (202 1/4)	5702 (224 1/2)	7065 (278 1/4)	8533 (336)
E (Xlens)	2514 (199)	2767 (109)	3278 (129 1/8)	4165 (164)	4993 (196 5/8)	5542 (218 1/4)	6867(270 3/8)	8294 (326 5/8)
F (LHole)	2762 (108 3/4)	3015 (118 3/4)	3526 (138 7/8)	4412 (173 3/4)	5240 (206 3/8)	5790 (228)	7114 (280 1/8)	8541 (336 3/8)
G (Lmax)	3446 (135 3/4)	3699 (145 3/4)	4210 (165 7/8)	5097(200 3/4)	5925 (233 3/8)	6474 (255)	7799 (307 1/8)	9226 (363 1/4)
Spacer								
(Red – L)	–10	–9.5	–9	–8	–7.5	–7	–3.5	–13.5
(Red – C)	15.5	14.5	13.5	12.5	12.5	12.5	15	4
(Green – L)	–12.5	–12	–11	–10	–10	–9.5	–9	–9
(Green – C)	12.5	12	11	10	10	9.5	9	9
(Blue – L)	10	9.5	9	8	7.5	7	3.5	13.5
(Blue – C)	–15.5	–14.5	–13.5	–12.5	–12.5	–12.5	–15	–4

[a] Sony VPS-100FH
[b] Sony VPS-120FH

Ceiling Installation Using Front Projection Flat Screen



E: Horizontal distance between the center of the screen and the center of the green lens
Tolerances
B: ±5%
Other measurements: 0% to +5%

Unit:mm (inches)

Screen size (inches)	90	100	120	150	180	200	250	300
A (Vsize)	1372 (54 1/8)	1524 (60)	1829 (72 1/8)	2286 (90)	2743 (108)	3048 (120)	3810 (150)	4572 (180)
B (Hcent)	1048 (41 3/8)	1109 (43 3/4)	1233 (48 5/8)	1447 (57)	1647 (64 7/8)	1780 (70 1/8)	2101 (82 3/4)	2446 (96 3/8)
C (Width)		28[a] (1 1/8)	32[b] (1 5/16)					
D (TD)	2587 (101 7/8)	2847 (112 1/8)	3373 (132 7/8)	4285 (168 3/4)	5137 (202 1/4)	5702 (224 1/2)	7065 (278 1/4)	8533 (336)
E (Xlens)	2514 (99)	2767 (109)	3278 (129 1/8)	4165 (164)	4993 (196 5/8)	5542 (218 1/4)	6867 (270 3/8)	8294 (326 5/8)
F (LHole)	2787 (109 3/4)	3040 (119 3/4)	3551 (139 7/8)	4437 (174 3/4)	5265 (207 3/8)	5815 (229)	7139 (281 1/8)	8566 (337 1/4)
G (Lmax)	3446 (135 3/4)	3699 (145 3/4)	4210 (165 7/8)	5097 (200 3/4)	5925 (233 3/8)	6474 (255)	7799 (307 1/8)	9226 (363 1/4)
Spacer								
(Red – L)	–10	–9.5	–9	–8	–7.5	–7	–3.5	–13.5
(Red – C)	15.5	14.5	13.5	12.5	12.5	12.5	15	4
(Green – L)	–12.5	–12	–11	–10	–10	–9.5	–9	–9
(Green – C)	12.5	12	11	10	10	9.5	9	9
(Blue – L)	10	9.5	9	8	7.5	7	3.5	13.5
(Blue – C)	–15.5	–14.5	–13.5	–12.5	–12.5	–12.5	–15	–4

[a] Sony VPS-100FH
[b] Sony VPS-120FH

Necessary parts modifications

Changing the polarity on the L and ED board.
For details, see "Changing the Polarity" on page 22 (E).

VPH-1292Q/QM MODEL ONLY

Installation Diagrams

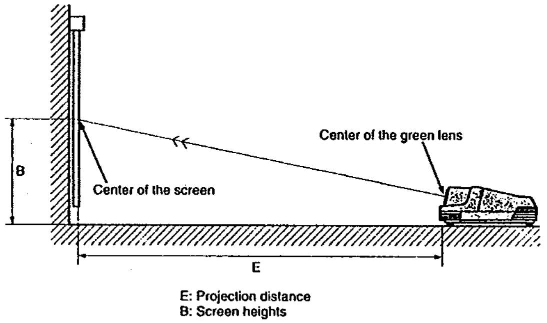
When the Screen Size is not Mentioned in the Tables

You can calculate the installation measurements with the tables on pages 102 (E) to 113 (E) (nonstandard installation) when you use the screen whose size is not mentioned in the tables on pages 10 (E), 11 (E) and 13 (E).

About the installation measurements

Check your installation conditions:

- Screen size (S)
- Installation measurements in the tables both for larger screen size (EL) and for smaller one (ES)
  See the tables on pages 102 (E) to 113 (E).



Now you can calculate the installation measurements as follows:
E (mm) = ES + ((S – smaller screen size) × (EL – ES) × 0.1)
B (mm) = E × 0.241 + 280

Example: when using 124-inch screen

According to the tables on page 104 (E), the values ES and EL are as follows:

ES = 3279 (As the smaller screen size is 120 inch.)
EL = 3570 (As the larger screen size is 130 inch.)

Therefore,

E (mm) = 3279 + ((124 – 120) × (3570 – 3279) × 0.1) = 3395 (mm)
B (mm) = 3395 × 0.241 + 280 = 1098 (mm)

Note

With nonstandard installation, the optical axis angle (TA) is fixed as follows:

- When using the front projection screen: 13.6° (B/E = 0.2419)
- When using the front projection screen: –2° (B/E = –0.0349)

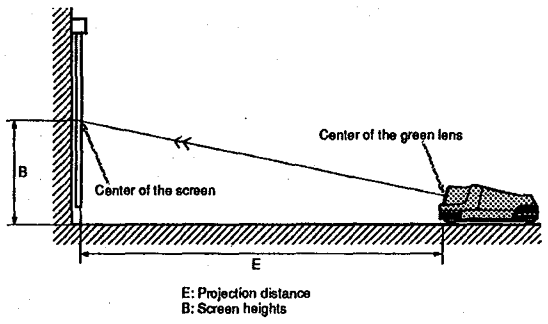
When the Screen Size is not Mentioned in the Tables

You can calculate the installation measurements with the tables on pages 102 (E) to 113 (E) (nonstandard installation) when you use the screen whose size is not mentioned in the tables on pages 10 (E), 11 (E) and 13 (E).

About the installation measurements

Check your installation conditions:

- Screen size (S)
- Installation measurements in the tables both for larger screen size (EL) and for smaller one (ES)
  See the tables on pages 102 (E) to 113 (E).



Now you can calculate the installation measurements as follows:
E (mm) = ES + ((S – smaller screen size) × (EL – ES) × 0.1)
B (mm) = E × 0.241 + 280

Example: when using 124-inch screen

According to the tables on page 104 (E), the values ES and EL are as follows:
ES = 3279 (As the smaller screen size is 120 inch.)
EL = 3570 (As the larger screen size is 130 inch.)
Therefore,
E (mm) = 3279 + ((124 – 120) × (3570 – 3279) × 0.1) = 3395 (mm)
B (mm) = 3395 × 0.241 + 280 = 1098 (mm)

Note

With nonstandard installation, the optical axis angle (TA) is fixed as follows:

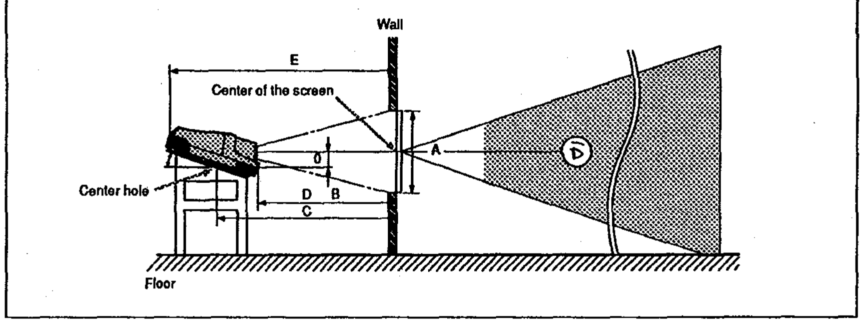
- When using the front projection screen (floor installation): 13.6° (B/E = 0.2419)
- When using the front projection screen (ceiling installation): –2° (B/E = – 0.0349)

Floor Installation Using Rear Projection Flat Screen

What is the optical axis angle?

The optical axis angle is the angle between the horizontal level line and the straight line from the center of the projector's green lens to the center of the screen. When using a rear projection screen, you can get the brightest picture when the center of the screen is aligned with a straight line extension of the center of the green lens.
Therefore, the most suitable optical axis angle (a) varies depending on the height of the screen and your line of sight.
With the standard installation, set up the projector and screen such that this angle is between 0° and 2°.

When the optical axis angle is 2°



Unit: mm (inches)

Screen size (inches)	90	100	120	150	180	200	250	300
A (Vsize)	1372 (54 1/8)	1524 (60)	182 (72 1/8)	2286 (90)	2743 (108)	3048 (120)	3810 (150)	4572 (180)
B (Hcent)	102 (4 1/8)	93 (3 3/4)	74 (3)	43 (1 3/4)	13 (17/32)	–6 (–1/4)	–53 (–2 1/8)	–104 (–4 1/8)
C (Lhole)	2873 (113 1/8)	3132 (123 3/8)	3653 (143 7/8)	4558 (179 1/2)	5402 (212 3/4)	5964 (234 7/8)	7316 (288 1/8)	8772 (345 3/8)
D (Xlens)	2567 (101 1/8)	2826 (111 3/8)	3348 (131 7/8)	4252 (167 1/2)	5097 (202 3/4)	5659 (222 7/8)	7011 (276 1/8)	8467 (333 3/8)
E (Lmax)	3535 (139 1/4)	3794 (149 1/2)	4316 (170)	5220 (205 5/8)	6065 (238 7/8)	6627 (261)	7979 (314 1/8)	9435 (371 1/2)
Spacer								
(Red – L)	3	3.5	4.5	5.5	6	6	–7.5	–7.5
(Red – C)	–9	–9	–8.5	–8	–8	–8	6.5	6.5
(Green – L)	–6	–6.5	–6.5	–7	–7	–7	–7	–7
(Green – C)	6	6.5	6.5	7	7	7	7	7
(Blue – L)	–3	–3.5	–4.5	–5.5	–6	–6	7.5	7.5
(Blue – C)	9	9	8.5	8	8	8	–6.5	–6.5

Necessary parts modifications

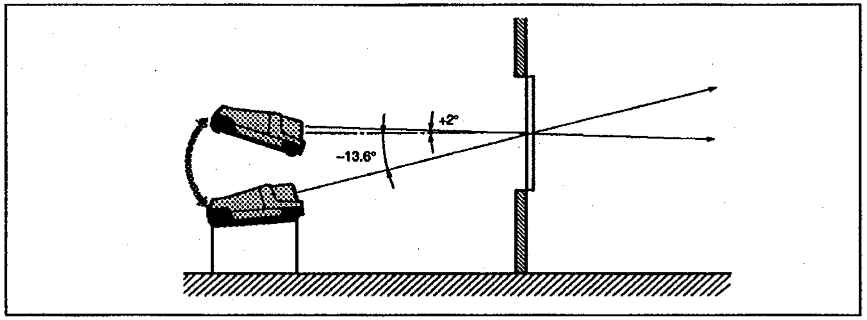
Changing the polarity on the L and ED board.
For details, see "Changing the Polarity" on page 22 (E).

Installation Diagrams

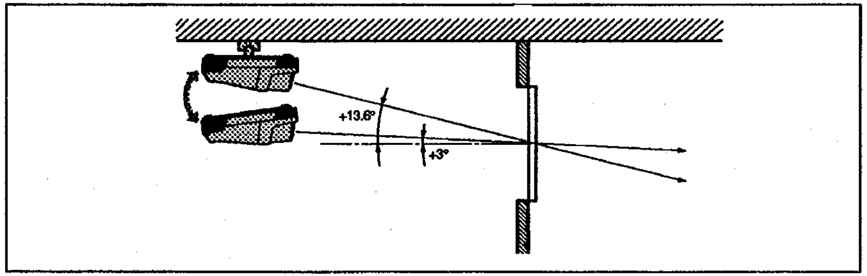
Variable Range of the Optical Axis Angle in Rear Projection

You can adjust the optical axis angle by using the ring spacers.

On floor installation
You can install the projector within an angle of optical axis +2° to –13.6°.



On ceiling installation
You can install the projector within an angle of optical axis +3° to +13.6°.



Notes on Screen

Screen Size

The screen size is the diagonal length of the screen in inches, while the aspect ratio of the screen is 4:3. The ratio of the screen height, width, and diagonal is 3:4:5. If you use a screen whose size is not given in the table below, you can calculate the screen height and width from the screen size (inches) as follows.

Height (mm) = Screen size $\times 25.4 \times {}^{3}/_{5}$
Width (mm) = Screen size $\times 25.4 \times {}^{4}/_{5}$

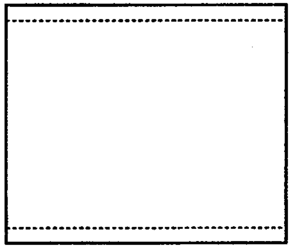
Screen size and dimensions

Screen size (inches) (Diagonal)	Height (mm)	Width (mm)
100	1524	2032
120	1829	2438
150	2286	3048
180	2743	3058
200	3048	4064
250	3810	5080
300	4572	6096

Screens with an Aspect Ratio Other Than 4:3

When the height is greater
Calculate the approximate screen size from the screen height as shown below. Install the projector and screen in accordance with the screen size obtained.

--- : Screen whose aspect ratio is 4:3



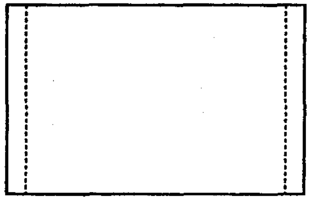
Screen size (inch) = (height (mm) $\times {}^{5}/_{3}) \times {}^{1}/_{25.4}$
Example: When the screen height is 1500 mm
(1500 (mm) $\times {}^{5}/_{3}) \times {}^{1}/_{25.4} = 98$ inches

Installation Diagrams

When the width is greater

Calculate the approximate screen size from the screen width as shown below. Install the projector and screen in accordance with the screen size obtained.

---: Screen whose aspect ratio is 4:3

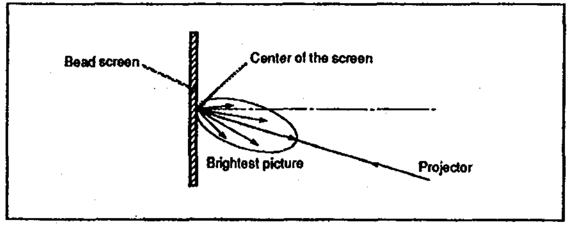


Screen size (inch) = (height (mm) × $^5/_4$) × $^1/_{25.4}$
Example: When the screen height is 2000 mm
(2000 (mm) × $^5/_4$) × $^1/_{25.4}$ = 98 inches

Types of Screen

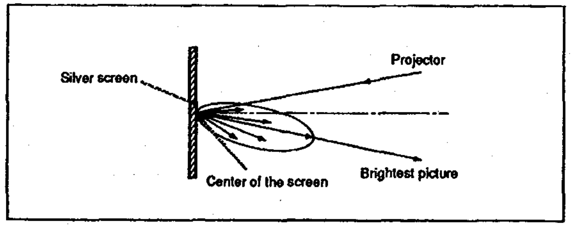
Front projection screen for floor installation

The bead screen is recommended. A screen of this type reflects the brightest light.


Bead screen
Center of the screen
Brightest picture
Projector

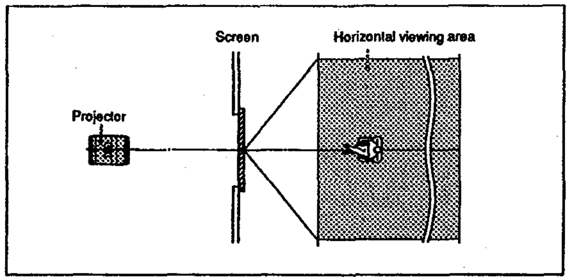
Front projection screen for ceiling installation

The silver screen is recommended. You can get a picture that is two to four times brighter.


Silver screen
Projector
Center of the screen
Brightest picture

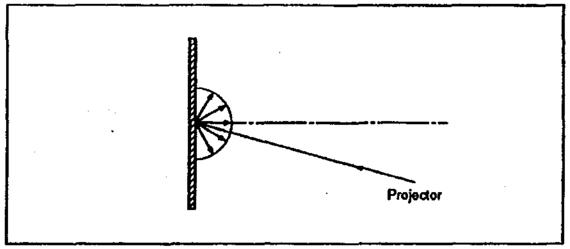
Rear projection screen

A screen manufactured using two sheets, the fresnel and lenticular, is recommended for a bright and clear full-screen picture projection.


Screen
Horizontal viewing area
Projector

White screen

When viewers watch the projected picture in a wide area, you can obtain a picture that appears equally bright from all parts of the room using the white screen for both floor and ceiling installations. Note that you will not be able to get a clear picture in this case unless the room is dark.

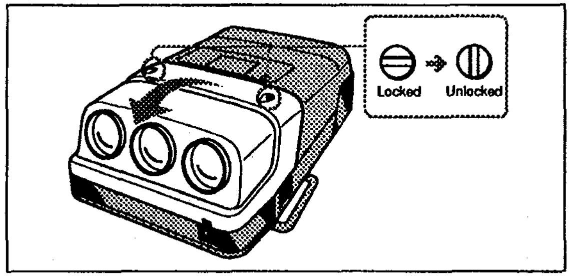


Modifying Parts

Removing the Front Cover

1 Turn off the main power.

2 Unlock the two screws on the projector by using a screwdriver or a coin edge, and then remove the front cover.


Locked
Unlocked

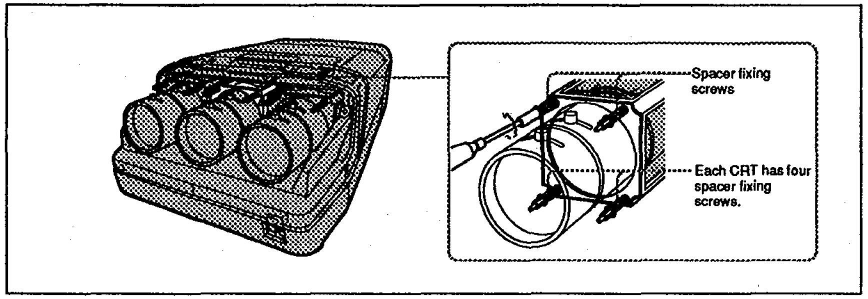
Changing the Ring Spacers

Adjust the ring spacers in accordance with the screen size and optical axis angle.
For the value of the appropriate ring spacers, see the table on pages 102 (E) to 113 (E).

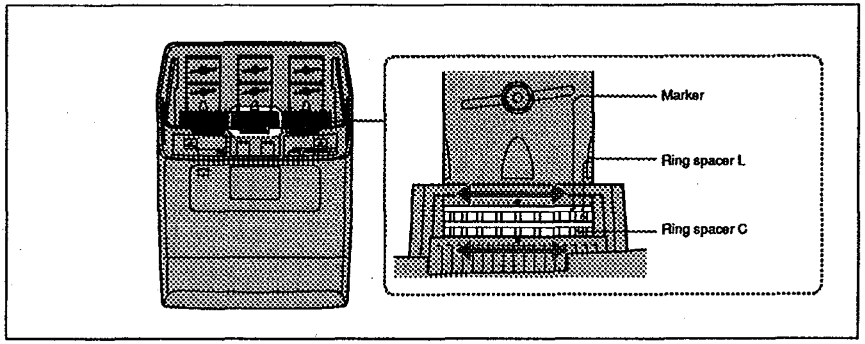
To adjust the ring spacers, follow the procedure below.

1 Remove the front cover.

2 Loosen the spacer fixing screws of the green CRT.


Spacer fixing screws
Each CRT has four spacer fixing screws.

3 Rotate the ring spacer C of the green CRT until the appropriate value is set to pointer.


Marker
Ring spacer L
Ring spacer C

4 Rotate the ring spacer L of the green CRT until the appropriate value is in the marker.

5 Push in and tighten the spacer fixing screws.

6 Repeat steps **2** to **5**, until you adjust the ring spacer C and L for the red and blue CRTs.

7 Replace the front cover.

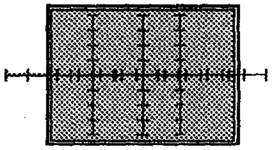
Adjusting the CRT Conversion Angle

Adjust the CRT conversion angle so that the three CRT images converge exactly. This adjustment is for the red and blue CRTs.

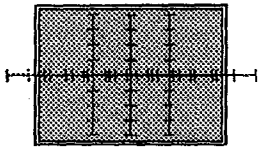
1 Remove the front cover.
For details, see "Removing the Front Cover" on page 18 (E).

2 Reset the green centering.
For details, see "Resetting the Standard Data to the Factory Preset Levels" on page 89 (E).

3 Make sure that the center of the green hatch pattern aligns with the center of the screen.
If it does not align the center of the screen, there may be some problem with the installation.

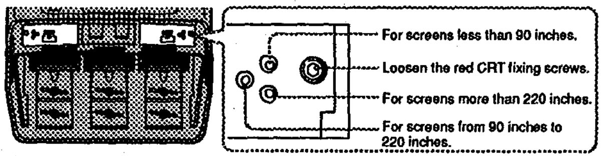


4 Make sure that the centers of the red and blue hatch patterns align at even intervals from the green hatch pattern.



5 Loosen the red CRT fixing screws.

6 Insert the screwdriver into one of the adjustment holes, according to the screen size.


For screens less than 90 inches.
Loosen the red CRT fixing screws.
For screens more than 220 inches.
For screens from 90 inches to 220 inches.

When using the screens larger than 220 inches, adjust the centering by ZONE adjustment after adjusting with the adjustment hole for more than 220 inches.

7 Turn the screwdriver until the vertical line of the red cross-hatch pattern converges with the green pattern.

8 Tighten the CRT fixing screws.

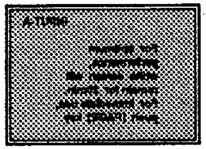
9 Repeat steps **6** to **9** for the blue CRT.

Changing the Polarity

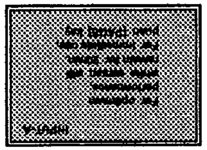
By default, this projector is preset for use in front projection when installed on the floor/desk. When the projector is installed on the ceiling or used in rear projection, you have to change the polarity of CRT corresponding to the installation methods.
For details, see the table on next page.

Change the polarity to obtain the correct picture.

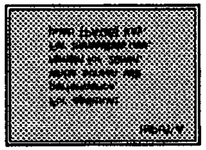
Ⓐ The letters are backward.
Change the connectors on the ED board.



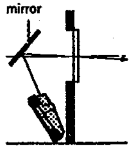
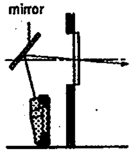
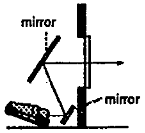
Ⓑ The letters are upside down.
Change the switch position on the L board.



Ⓒ The letters are upside down and backward.
Change the switch position on the L board and the connectors on the ED board.



Change polarity according to the installation method, described below.

Installation methods	Change on L board	Change on ED board	On-screen display (See page 22 (E))
Front projection, ceiling	Y	Y	Ⓒ
Rear projection, floor	N	Y	Ⓐ
Rear projection, ceiling	Y	N	Ⓑ
Rear projection using mirrors			
①Using a mirror  	N	N	Correct picture
②Using a mirror  	Y	Y	Ⓒ
③Using two mirrors  	N	Y	Ⓐ
Others	Display letters on the screen so that you can determine which changes to make.		

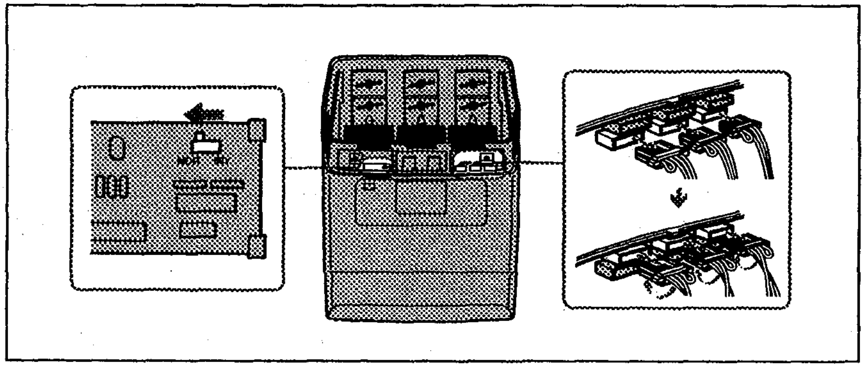
Y: Necessary
N: Not necessary

How to change the polarity

1 Turn off the power.

2 Remove the front cover.
For details, see "Removing the Front Cover" on page 18 (E).

3 Change switches or connectors.
L board: Set to the desired position.
NOR: Normal picture
INV: Invert the picture vertically.
ED board: Reinsert the connectors after turning them over (180°).



4 Make sure to insert the connectors firmly, then restore the front cover.

Note
After changing the polarity, the center of the picture may be off from the center of the screen. In this case, adjust the registration and centering for the screen.

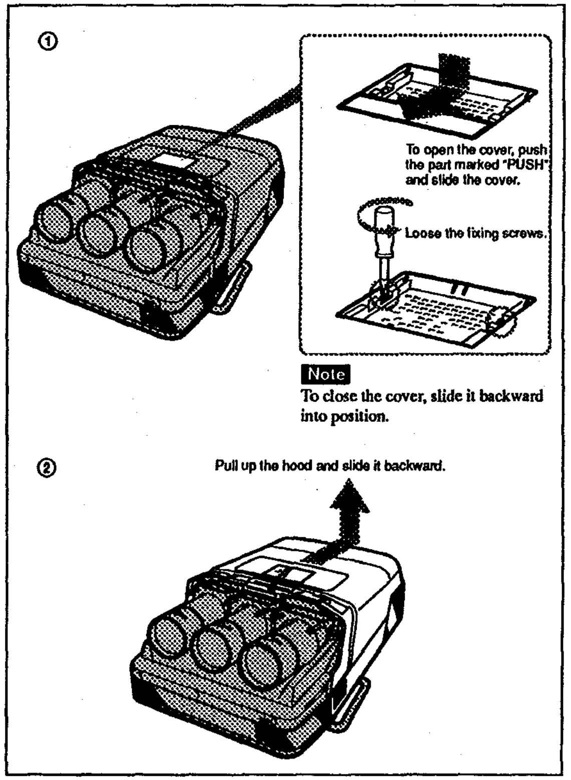
Setting the Dynamic Picture

When using a composite or Y/C input video signal, you can get high quality picture contrast by switching the DYNAMIC PIC SW on the BA board. (This switch is set to OFF at the factory).

1 Remove the front cover.
For details, see "Removing the Front Cover" on page 18 (E).

2 Remove the hood.

① Loose the fixing screws.
② Pull up the hood and slide it backward.

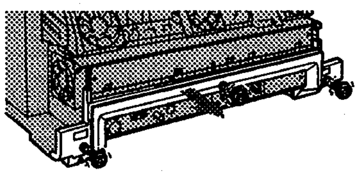

①
To open the cover, push the part marked "PUSH" and slide the cover.
Loose the fixing screws.
②
Pull up the hood and slide it backward.

Note
To close the cover, slide it backward into position.

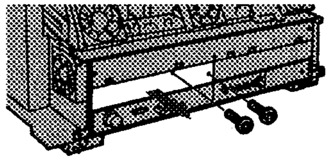
(Continued)

Modifying of Parts

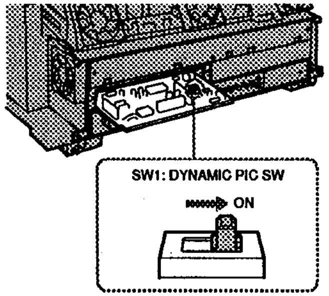
3 Loosen the three screws on the upper part of the connector panel, and then remove the frame.



4 Remove the two screws on the upper cover of the connector panel, and remove the cover.



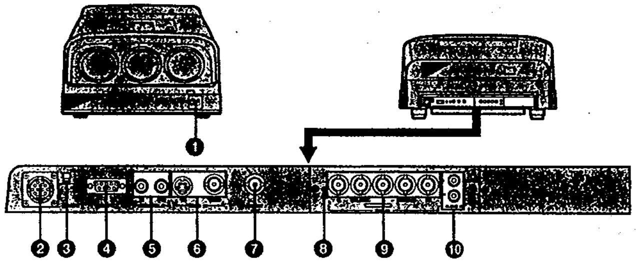
5 Pull the BA board out toward you and set the SW 1: DYNAMIC PIC SW on the board to ON.



6 Replace the parts following steps **1** to **4** in reverse.

VPH-1292Q/QM MODEL ONLY

Location and Function of Connectors



❶ AC IN socket
Connect the supplied AC power cord here. This socket accepts 120V AC power (for the VPH-1292Q) or 220 to 240V AC (for the VPH-1292QM).

❷ REMOTE 1 connector (14-pin, male)
Connects to the REMOTE 1 connector of the optional PC-1271/1271M Signal Interface Switcher.

❸ 5 BNC switch
Normally, set to the NORMAL.
If you wish to project a high resolution picture using the PC-1271/1271M Signal Interface Switcher, set to the 5BNC position.
For details, see "When Projecting the High Resolution Pictures" on page 34 (E).

❹REMOTE 2 connector (9-pin, female)
Connects to the RS-422 interface for communication with a computer.

❺CONTROL S IN/OUT jacks (phono type)
Connects to the CONTROL S connector of other Sony equipment. You can control the whole system with a single remote control.
CONTROL S IN: Connects to CONTROL S OUT jack of the supplied remote control to be used as a wired remote control.

Note
When using this connector, the remote control detector on the projector does not function.

❻VIDEO IN connectors
Y/C (4-pin, mini-DIN type): Connects to the Y/C video output (S VIDEO OUT) of a VCR.
VIDEO (BNC type): Connects to the composite video output of the video equipment.

Note
The VIDEO connector is disconnected automatically when a cable is connected to the Y/C connecter.

❼VIDEO OUT connector (BNC type)
Connects to the video input of a color monitor.
This output signal is the loop-through output from the input signal to the VIDEO IN connectors.

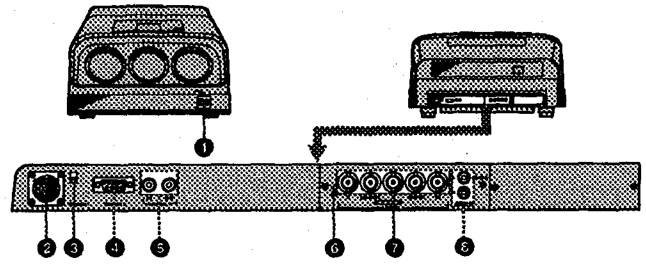
❽Indicator
Lights when INPUT A mode is selected.

❾RGB IN connectors (BNC type)
R, G/G SYNC, B, SYNC/HD, VD connectors: Connects to the RGB outputs of a computer or a video camera.

❿AUDIO IN L/R jacks (phono type)
Not used.

VPH-1292QMG MODEL ONLY

Location and Function of Connectors



❶ **AC IN socket**
Connect the supplied AC power cord here. This socket accepts 220 to 240V AC .

❷ **REMOTE 1 connector (14-pin, male)**
Connects to the REMOTE 1 connector of the optional PC-1271M Signal Interface Switcher.

❸ **5 BNC switch**
Normally, set to the NORMAL.
If you wish to project a high resolution picture using the PC-1271M Signal Interface Switcher, set to the 5BNC position.
For details, see "When Projecting the High Resolution Pictures" on page 34 (E).

❹ **REMOTE 2 connector (9-pin, female)**
Connects to the RS-422 interface for communication with a computer.

❺ **CONTROL S IN/OUT jacks (phono type)**
Connects to the CONTROL S connector of other Sony equipment. You can control the whole system with a single remote control.
CONTROL S IN: Connects to CONTROL S OUT jack of the supplied remote control to be used as a wired remote control.

Note
When using this connector, the remote control detector on the projector does not function.

❻ **Indicator**
Lights when INPUT A mode is selected.

❼ **RGB IN connectors (BNC type)**
R, G/G SYNC, B, SYNC/HD, VD connectors:
Connect to the RGB outputs of a computer or a video camera.

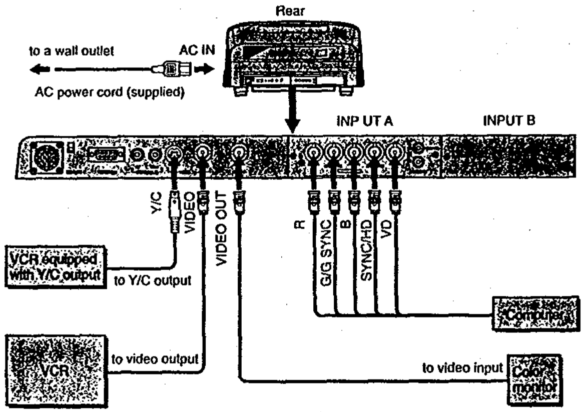
❽ **AUDIO IN L/R jacks (phono type)**
Not used.

VPH-1292Q/QM MODEL ONLY

Connecting Directly to the Projector

You can expand the system connections by installing the optional interface board on INPUT A or B section, or in combination shown in the examples below.

When a color monitor is not connected to the computer

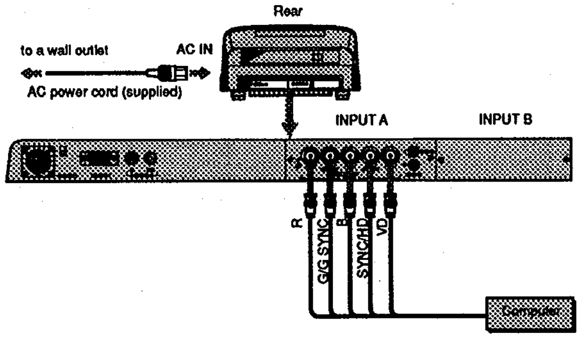

Rear
to a wall outlet
AC IN
AC power cord (supplied)
INP UT A
INPUT B
Y/C
VIDEO
VIDEO OUT
R
G/G SYNC
B
SYNC/HD
VD
VCR equipped with Y/C output
to Y/C output
VCR
to video output
Computer
to video input
Color monitor

Notes
- The VIDEO connector is disconnected automatically when a cable is connected to the Y/C connector.
- The external sync signal has priority over the internal sync signal. However, when the external sync signal is not stable, the internal sync signal has priority.

Connecting Directly to the Projector

You can expand the system connections by installing the optional interface board on INPUT A or B section, or in combination shown in the examples below.

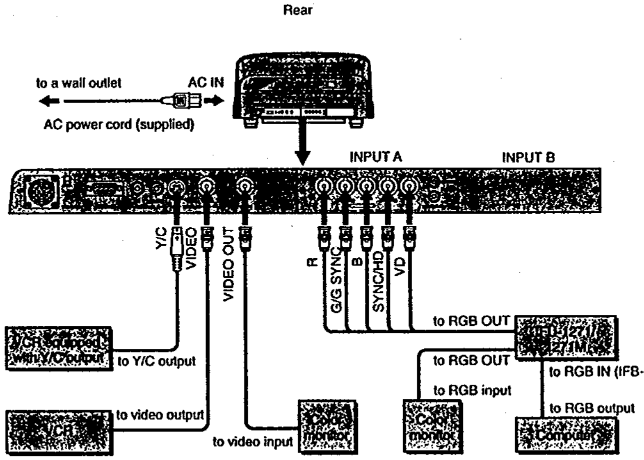
When a color monitor is not connected to the computer


Rear
to a wall outlet
AC IN
AC power cord (supplied)
INPUT A
INPUT B
R
G/G SYNC
B
SYNC/HD
VD
Computer

Note
The external sync signal has priority over the internal sync signal. However, when the external sync signal is not stable, the internal sync signal has priority.

When a color monitor is connected to the computer

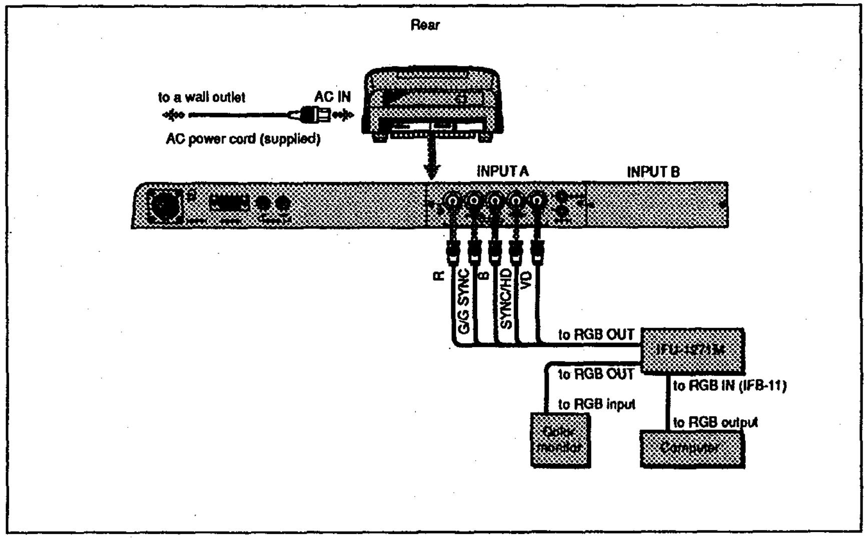
Use the IFU-1271/1271M Signal Interface Unit.


Rear
to a wall outlet
AC IN
AC power cord (supplied)
INPUT A
INPUT B
Y/C
VIDEO
VIDEO OUT
R
G/G SYNC
B
SYNC/HD
VD
VCR equipped with Y/C output
to Y/C output
VCR
to video output
to video input
Color monitor
to RGB OUT
to RGB OUT
to RGB input
Color monitor
IFU-1271/1271M
to RGB IN (IFB-11)
to RGB output
Computer

VPH-1292QMG MODEL ONLY

When a color monitor is connected to the computer

Use the IFU-1271M Signal Interface Unit.

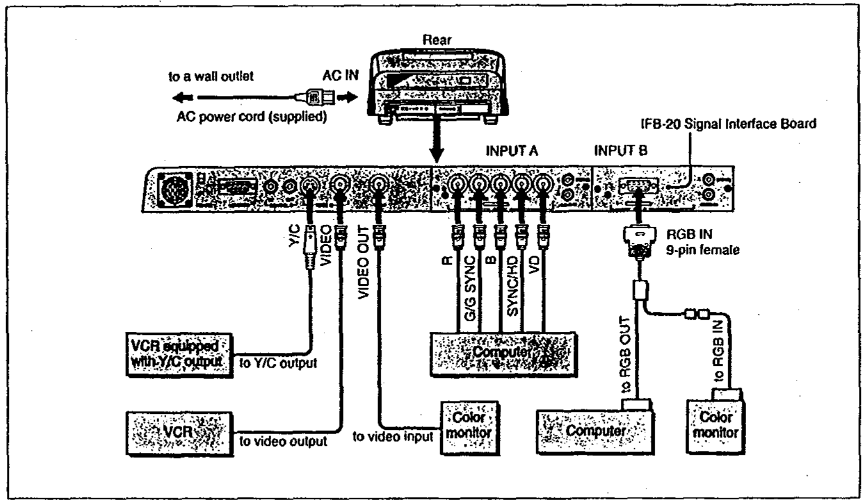

Rear
to a wall outlet
AC IN
AC power cord (supplied)
INPUT A
INPUT B
R
G/G SYNC
B
SYNC/HD
VD
to RGB OUT
IFU-1271M
to RGB OUT
to RGB input
Color monitor
to RGB IN (IFB-11)
to RGB output
Computer

VPH-1292Q/QM MODEL ONLY

Connecting Directly to the Projector

When a computer is connected to the projector using the SIC-series connecting cable

Install the optional interface board to the INPUT A or INPUT B section.


Rear
to a wall outlet
AC IN
AC power cord (supplied)
IFB-20 Signal Interface Board
INPUT A
INPUT B
Y/C
VIDEO
VIDEO OUT
R
G/G SYNC
B
SYNC/HD
VD
RGB IN
9-pin female
VCR equipped with Y/C output
to Y/C output
VCR
to video output
to video input
Color monitor
Computer
to RGB OUT
to RGB IN
Computer
Color monitor

Note
Use the standard SIC cable. Be sure not to extend the length of the cable. Otherwise, the picture may be distorted.

Installing the optional interface board

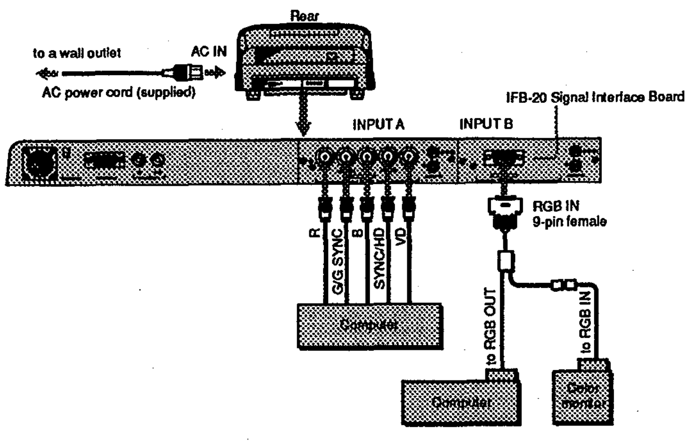
1. Loosen the two screws on the INPUT A or INPUT B panel and pull out the board toward you. (The screws are retained in the hole, to prevent them from getting lost.)
2. Insert the optional interface board and tighten the screws.

VPH-1292QMG MODEL ONLY

Connecting Directly to the Projector

When a computer is connected to the projector using the SIC-series connecting cable

Install the optional interface board to the INPUT A or INPUT B section.


Rear
to a wall outlet
AC IN
AC power cord (supplied)
IFB-20 Signal Interface Board
INPUT A
INPUT B
RGB IN
9-pin female
R
G/G SYNC
B
SYNC/HD
VD
Computer
to RGB OUT
to RGB IN
Computer
Color monitor

Note
Use the standard SIC cable. Be sure not to extend the length of the cable. Otherwise, the picture may be distorted.

Installing the optional interface board

1 Loosen the two screws on the INPUT A or INPUT B panel and pull out the board toward you. (The screws are retained in the hole, to prevent them from getting lost.)

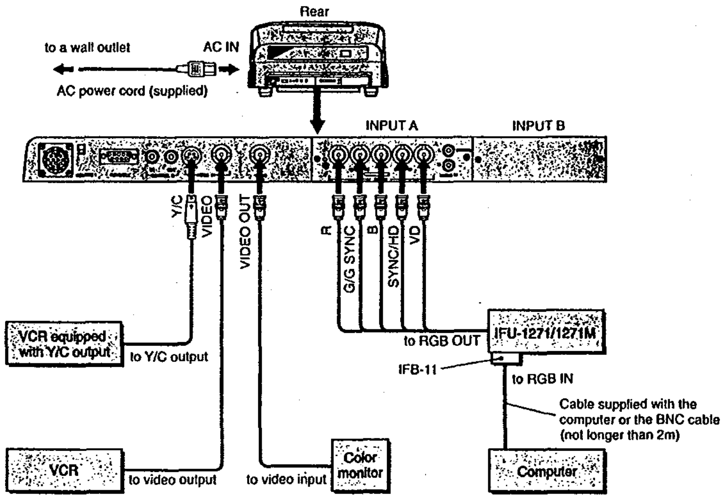
2 Insert the optional interface board and tighten the screws.

VPH-1292Q/QM MODEL ONLY

Connecting When the Projector Is Away From Other Equipment

Use the IFU-1271/1271M Signal Interface Unit or the PC-1271/1271M Signal Interface Switcher (not supplied).

Connecting a computer using the BNC cable

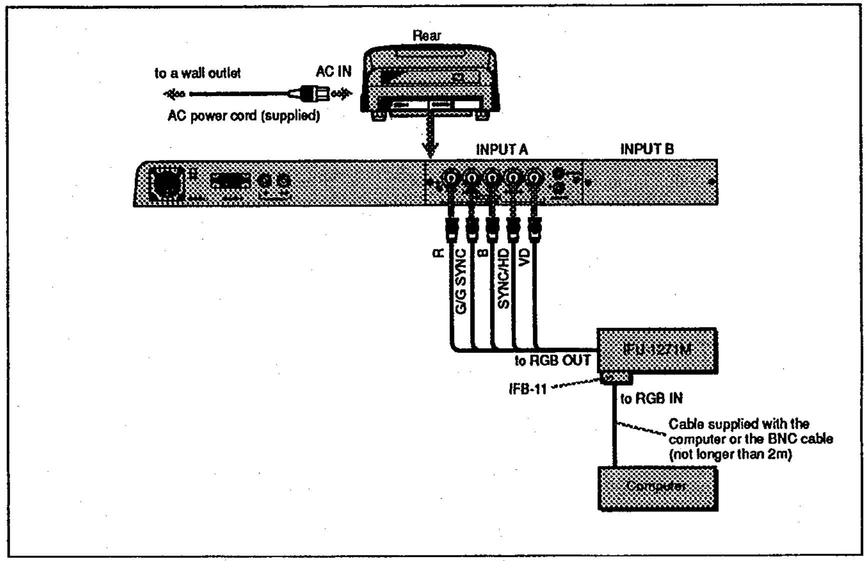

Rear
to a wall outlet
AC IN
AC power cord (supplied)
INPUT A
INPUT B
Y/C
VIDEO
VIDEO OUT
R
G/G SYNC
B
SYNC/HD
VD
VCR equipped with Y/C output
to Y/C output
to RGB OUT
IFU-1271/1271M
IFB-11
to RGB IN
Cable supplied with the computer or the BNC cable (not longer than 2m)
VCR
to video output
to video input
Color monitor
Computer

Note
When using a color monitor, connect the RGB input on the monitor to the RGB OUT connectors on the IFU-1271/1271M Signal Interface Unit.

Connecting When the Projector Is Away From Other Equipment

Use the IFU-1271M Signal Interface Unit or the PC-1271M Signal Interface Switcher (not supplied).

Connecting a computer using the BNC cable

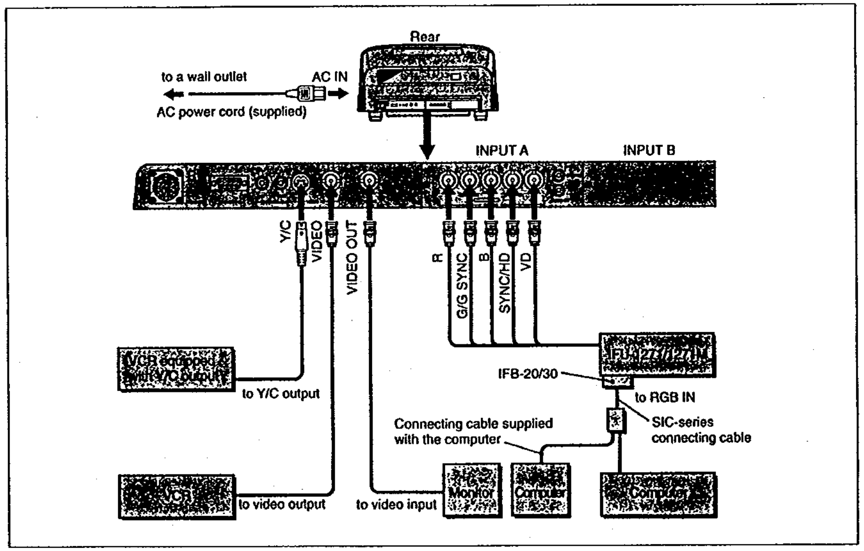

Rear
to a wall outlet
AC IN
AC power cord (supplied)
INPUT A
INPUT B
R
G/G SYNC
B
SYNC/HD
VD
to RGB OUT
IFU-1271M
IFB-11
to RGB IN
Cable supplied with the computer or the BNC cable (not longer than 2m)
Computer

Note

When using a color monitor, connect the RGB input on the monitor to the RGB OUT connectors on the IFU-1271M Signal Interface Unit.

Connecting When the Projector Is Away From Other Equipment

Connecting the computer using the SIC-series connecting cable

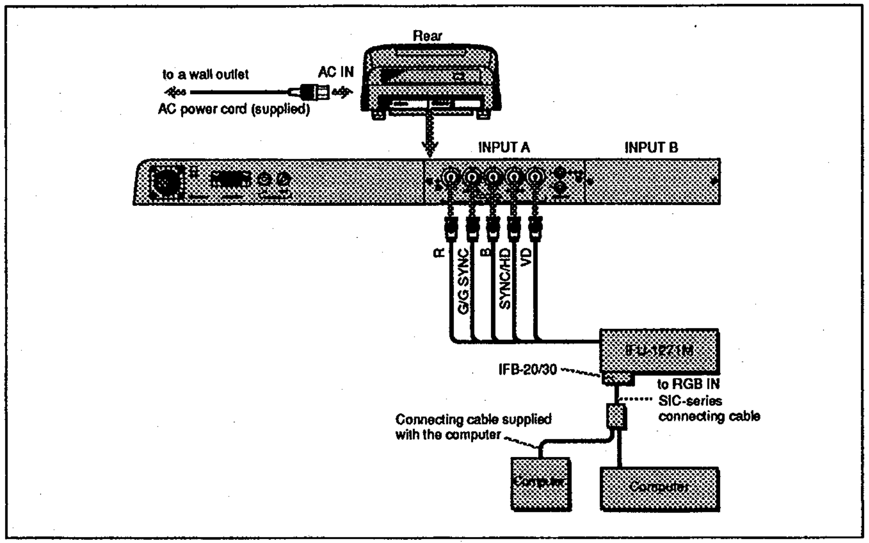

Rear
to a wall outlet
AC IN
AC power cord (supplied)
INPUT A
INPUT B
Y/C
VIDEO
VIDEO OUT
R
G/G SYNC
B
SYNC/HD
VD
VCR equipped with Y/C output
to Y/C output
IFU-1271/1271M
IFB-20/30
to RGB IN
Connecting cable supplied with the computer
SIC-series connecting cable
VCR
to video output
to video input
Monitor
Computer
Computer

Note

To prevent the signal loss, be careful with the length and thickness of the cable when projecting the high resolution picture.

Connecting When the Projector Is Away From Other Equipment

Connecting the computer using the SIC-series connecting cable


Rear
to a wall outlet
AC IN
AC power cord (supplied)
INPUT A
INPUT B
R
G/G SYNC
B
SYNC/HD
VD
IFB-20/30
to RGB IN
SIC-series connecting cable
Connecting cable supplied with the computer
Computer
Computer

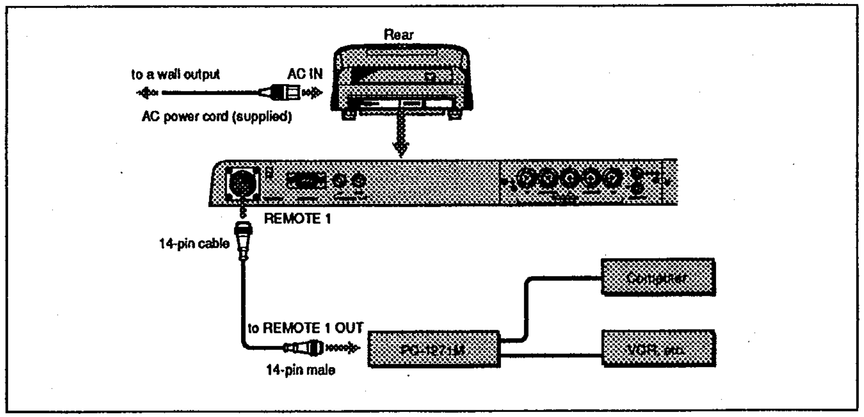
Note

To prevent the signal loss, be careful with the length and thickness of the cable when projecting the high resolution picture.

Connecting More Than Four Input Sources

Using the PC-1271M Signal Interface Switcher

When you use the PC-1271M Signal Interface Switcher (not supplied), you can connect easily more than four input sources. Connect the projector to the PC-1271M using the CCQ-BRS or SIC-M connecting cable.
You can select up to 16 inputs by pressing the SWITCHER/INDEX keys on the remote control or the SWITCHER keys on the control panel of the projector.


Rear
to a wall output
AC IN
AC power cord (supplied)
REMOTE 1
14-pin cable
to REMOTE 1 OUT
14-pin male
PC-1271M
Computer
VCR, etc.

Choose the appropriate cable from the following table.

1 m	2 m	5 m	10 m	15 m	25 m	50 m
-	CCQ-2BRS	CCQ-5BRS	CCQ-10BRS	–	CCQ-25BRS	CCQ-50BRS
SIC-M-1	–	SIC-M-5	–	SIC-M-15	SIC-M-25	SIC-M-50

Notes

- Insert the female and male plugs of the CCQ-BRS or SIC-M cable correctly.
- You can extend the CCQ-BRS or SIC-M cable up to 50 m.
- You can connect other equipment to the VIDEO IN and RGB IN connectors even when the switcher is connected.

Using the SWITCHER/INDEX (SWITCHER) keys

When using the remote control, set the SWITCHER/INDEX select switch to SWITCHER. Press a number key between 1 and 8 to select the input number of the switcher. When two switchers are connected, use the SECOND key. To control the second switcher (SINGLE/SECOND/OTHER switch on the switcher is set to SECOND), first press SECOND key and then a number key.

VPH-1292Q/QM MODEL ONLY

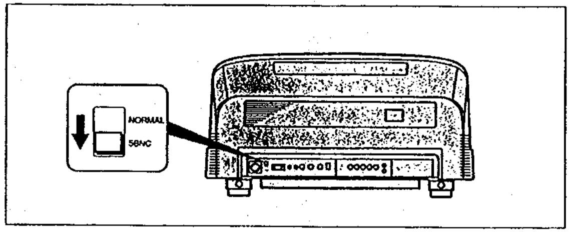
Connecting More Than Four Input Sources

When Projecting the High Resolution Pictures

When projecting the video signal which is above 70 MHz or projecting the high resolution pictures such as the computer graphics (CG), you should set the projector to the high resolution mode by switching the 5BNC switch.
To set the projector to the high resolution mode, set the 5BNC switch on the rear panel of the projector to 5BNC.

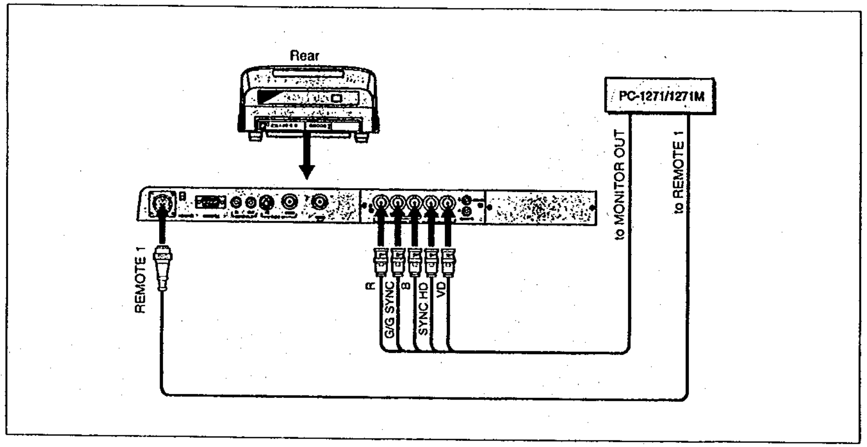
Note
Before this setting, turn off the power.

1 Set the 5BNC switch on the rear panel to 5BNC.



2 Connect the REMOTE 1 connectors of the projector and switcher with the CCQ-BRS or SIC-M cable.

3 Connect the RGB IN connectors of the projector and the MONITOR OUT connectors of the switcher with five BNC cables.



VPH-1292QMG MODEL ONLY

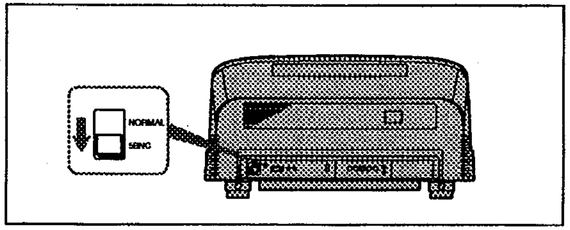
Connecting More Than Four Input Sources

When Projecting the High Resolution Pictures

When projecting the video signal which is above 70 MHz or projecting the high resolution pictures such as the computer graphics (CG), you should set the projector to the high resolution mode by switching the 5BNC switch.
To set the projector to the high resolution mode, set the 5BNC switch on the rear panel of the projector to 5BNC.

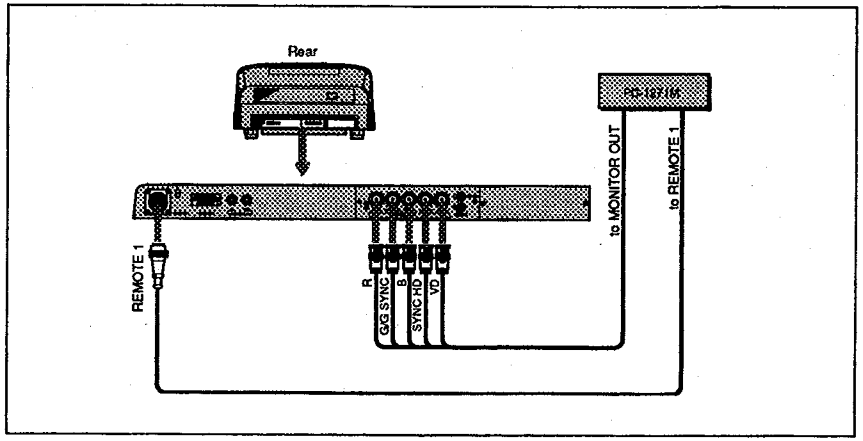
Note
Before this setting, turn off the power.

1 Set the 5BNC switch on the rear panel to 5BNC.



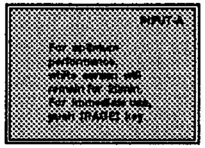
2 Connect the REMOTE 1 connectors of the projector and switcher with the CCQ-BRS or SIC-M cable.

3 Connect the RGB IN connectors of the projector and the MONITOR OUT connectors of the switcher with five BNC cables.



Adjustment Procedures

Before Starting Adjustment
Before adjusting the registration, make sure to turn on the projector and allow it to warm up for 20 minutes.
The projector is designed with a warm-up period of about 20 minutes after turning on the power. During this period, it displays a white screen with the message shown below. 35 seconds after the warming up starts, the message will disappear temporarily and will appear subsequently for 5 seconds every 30 seconds.



Press the PAGE key to cancel the warming up, if you wish to see the picture immediately.
You may also set the projector for a shorter or no warming up period.
For details, see "Changing the Initialization Period" on page 93 (E).

Perform each adjustment with the supplied remote control before connecting to the external equipment. After the adjustment, save the data. Next, adjust for each input signal precisely.

Follow the procedure below.

①Prepare the remote control. *(page 36 (E))*
↓
②Adjust roughly without input signal. *(page 49 (E))*
↓
③Save the adjustment data as the standard data. *(page 77 (E))*
↓
④Adjust fine for each input signal. *(page 80 (E))*
↓
⑤Activate the memory protection of the remote control. *(page 91 (E))*
↓
⑥Adjust the picture. *(page 92 (E))*

For Remote Control

All adjustments, except focusing the lens, can be made with the supplied remote control.
Normally, the adjustment keys on the remote control are inoperable to prevent accidental adjustments. Cancel the protection before adjusting.
Since the remote control uses infrared, you can use it without a wire.
However, in order to correctly control the projector, you should connect the remote control to the projector with the supplied remote control cable.

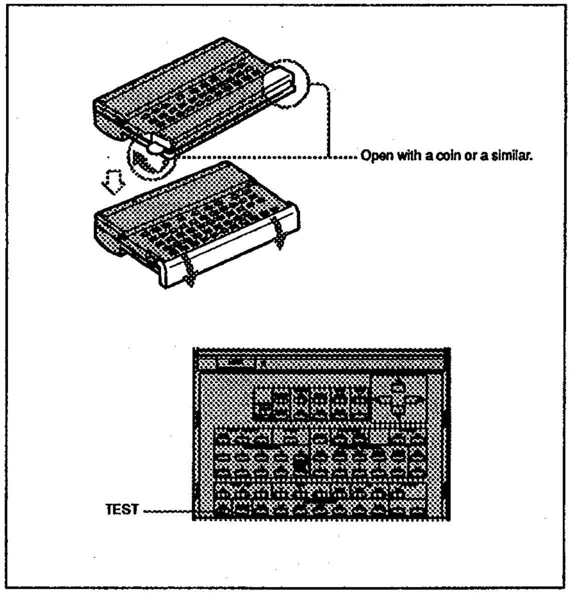
Preparation

1 Insert three of the supplied AA size batteries (R6) with the polarities lined up correctly.

2 Connect the remote control to the projector.

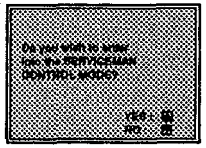
3 Turn on the MAIN POWER switch on the projector, and then press the POWER ON key on the remote control.

4 Remove the panel cover of the adjustment keys.



5 Hold down the TEST key for 5 seconds.

The following display appears.



Do you wish to enter
into the SERVICEMAN
CONTROL MODE?

YES : ▲
NO : ▼

6 Press the ▲ key.

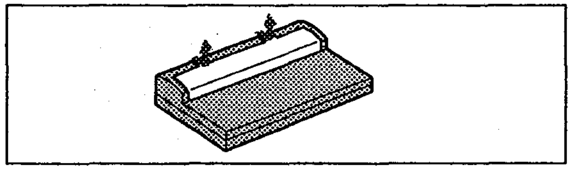
The protection on the adjustment keys is removed and the keys are enabled.
After the adjustment, reactivate the protection.
For details, see "Protecting the Setting" on page 91 (E).

Notes for wireless remote control operation

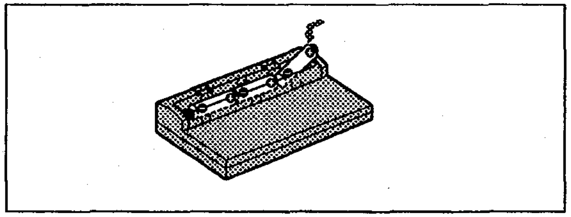
- Be sure that there are no obstructions between the remote control and the projector.
- Operating range is limited. The shorter the distance between the remote control and the projector, the wider the angle in which the remote control can control the projector.

Battery Installation

1 Push to open the lid.



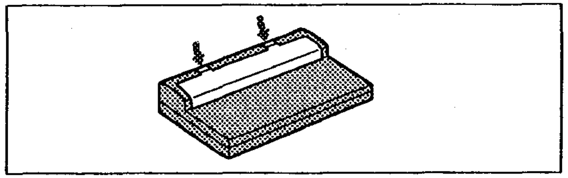
2 Install three AA (R6) batteries with the correct polarity.



(Continued)

For Remote Control

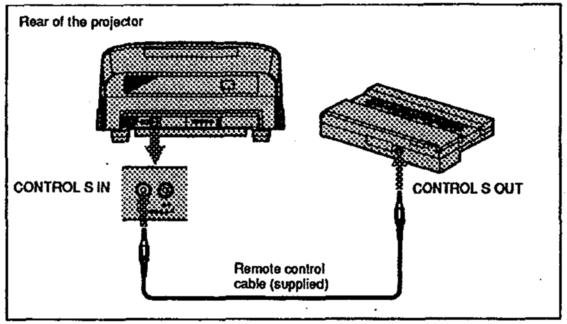
3 Replace the lid.



Notes on batteries

- If the projector does not operate properly, the batteries might be worn out. Replace all three of them with new ones.
- The life of the batteries depends on frequency of usage and how often you use the LIGHT button. If they are worn out quickly, replace them with new alkaline batteries.
- To avoid damage from possible battery leakage, remove the batteries when the remote control will not be used for a long time.

Connecting the remote control to the projector

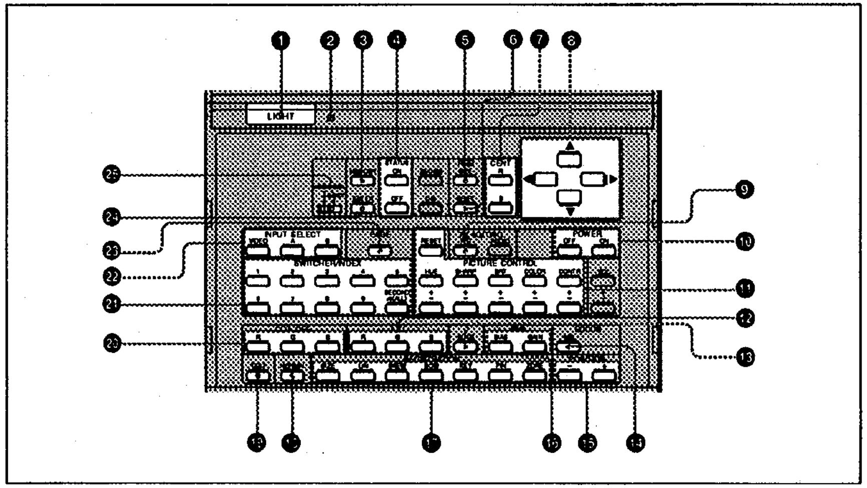


Note

When you connect the remote control to the projector as mentioned above, the remote control detector of the projector does not function. For wireless operation, be sure to disconnect both plugs from the projector and the remote control.

Keys on the Remote Control

Note
The C.B, SECAM, INPUT SELECT VIDEO, AUDIO MUTE and VOLUME keys do not function with this projector.



① LIGHT button
Illuminates the key indicators on the remote control. If you do not use the keys for approximately 30 seconds, the light automatically goes out.

② Transmission indicator
Lights each time you press a key.

③ MEMORY key
Stores various adjustment data into memory.

④ STATUS ON/OFF key
ON: Restores the on-screen display.
OFF: Removes the on-screen display.

Note
The PAGE display appears even when you press the OFF key.

⑤ RGB SIZE key
Adjusts the size of the picture for the video and RGB signal inputs.
To adjust the size, press this key. You can adjust the size of the picture with the four arrow keys. After adjustment, save the data by pressing the MEMORY key.
◀: Reduces the horizontal size.
▶: Expands the horizontal size.
▲: Expands the vertical size.
▼: Reduces the vertical size.

⑥ RGB SHIFT key
Adjusts the shift of the picture for the RGB signal input.
To adjust the shift, press this key. You can adjust the shift of the picture with the four arrow keys. The picture shifts according to the direction of the arrow. After adjustment, save the data by pressing the MEMORY key.

Note
This key does not function with the composite or Y/C video signal input.

⑦ CENT R/B keys
Adjust the centering of the red and blue.
You can adjust the centering with the four arrow keys.
CENT R: Enters the red centering adjustment mode.
CENT B: Enters the blue centering adjustment mode.

⑧ Arrow keys
Used for various adjustment functions.

⑨ PJ MUTING PIC key
Cuts off the picture. To restore the picture, press the key again or the CONTR + key.

⑩ POWER ON/OFF keys
Turn the projector on and off.

⑪ PICTURE CONTROL keys
Adjust picture condition: hue, sharpness, brightness, color, and contrast. To restore the standard levels, press the RESET key.

⑫ ADJ R/G/B (adjust red/green/blue) keys
Select color to be adjusted when adjusting the registration.

⑬ BLKG (blanking) key
Enters the blanking adjustment mode.
You can adjust the blanking with the four arrow keys.
For details, see "Adjusting the Blanking" on page 76 (E).

⑭ FOCUS MG key
Enters each of the magnetic focus, AQP and DQP adjustment mode.
For details, see "Adjusting the Focus" on page 48 (E).

⑮ POSITION +/– keys
Used for adjusting zone and blanking.
For details, see "Releasing the Blanking" on page 59 (E) and "Adjusting the Blanking" on page 76 (E).

⑯ W/B (white balance) keys
Enter the white balance adjustment mode.
BIAS: Adjusts cut off.
GAIN: Adjusts drive.

⑰ REGISTRATION keys
SIZE/LIN/SKEW/BOW/KEY/PIN/ZONE
Select the desired item for adjusting registration. You cannot adjust the registration with the four arrow keys, ADJ keys and POSITION +/– keys.
For details, see "Adjusting the Registration" on page 56 (E).

⑱ NORMAL key
Cancels the test pattern or serviceman control mode.

⑲ TEST key
Displays the internal test patterns.
Each time you press this key, 8 test patterns appear sequentially on the screen. When adjusting registration and white balance, appropriate patterns will appear for each adjustment.
For details, see "Test Patterns" on page 46 (E).

⑳ CUT OFF keys
Select the color to be turned off when adjusting the registration. Press again to turn on the color.
R: Red signal
G: Green signal
B: Blue signal

㉑ SWITCHER/INDEX keys
When the SWITCHER/INDEX select switch is set to SWITCHER
Designate the input from switcher when the PC-1271M Signal Interface Switcher is connected. The SECOND key is used when two switchers are connected.
To select the input from the second switcher (when the SINGLE/SECOND/OTHER switch on the switcher is set to SECOND), press a number key between 1 and 8 after pressing the SECOND key.
When the SWITCHER/INDEX select switch is set to INDEX
These keys function when the optional IFB-101 Interface Board is installed and multiple projectors are connected.
For details, refer to the Operating Instructions of the IFB-101.

㉒ INPUT SELECT keys
Select the input signal.
A: The signal input from the RGB IN connectors
B: The signal input from the connectors of B section (when the optional interface unit is installed)

㉓ PAGE key
Displays and switches between the following five on-screen displays. (You can adjust parameters only on PAGE 1, 2, 3, and 5.)
PAGE 1: Displays the status of STATUS ON/OFF and PIC MUTING ON/OFF.
PAGE 2: Displays the picture conditions parameters; contrast, color, brightness, sharpness and hue.
PAGE 3: Displays the color temperature, clamp setting and vertical shift range.
PAGE 4: Displays the input signal conditions; fH, fV, H/C-sync, V-sync, Sync on Green, input signal, and registration memory block assignment.
PAGE 5: Display the current use time of each cathode-ray tube (CRT) and the baud rate setting for communicating via the RS-422.
For details of these pages, see "PAGE Displays" on next page.

㉔ ENTER key
Functions when the optional IFB-101 Interface Board is attached and multiple projectors are connected.
For details, refer to the Operating Instructions of the IFB-101.

㉕ SWITCHER/INDEX select switch
Selects the SWITCHER/INDEX key function.
When using the switcher as the input selector, set to SWITCHER. When using the IFB-101 Interface Board and multiple projectors, set to INDEX.

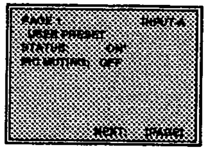
PAGE Displays and Test Patterns

PAGE Displays

Press the PAGE key to display the following five on-screen displays. You can adjust the parameters on PAGE 1, 2, 3 or 5.
The display changes in the following order every time you press the PAGE key:

PAGE 1 → PAGE 2 → PAGE 3 → PAGE 4 → PAGE 5
Original screen

PAGE 1

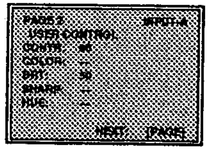


STATUS: ON/OFF
The setting is stored even when the power is turned off. If the on-screen display does not appear, check that STATUS ON is displayed.

PIC MUTING: ON/OFF
Whenever the power is turned on, PIC MUTING is set to OFF. If the picture does not appear, check that PIC MUTING is set to ON.

"---" indicates that the control does not function with the current input signal.
To change the settings, adjust with the appropriate keys.

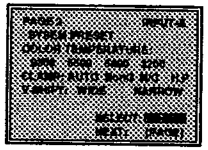
PAGE 2



Picture settings; contrast, color, brightness, sharpness and hue are displayed.
The levels can be changed independently for the signal input from different input connectors. (You can check from the message displayed in the upper right corner of the screen).

"---" indicates that the control does not function with the current input signal. (In this case, the input signal is RGB.)
To change the levels, use the PICTURE CONTROL key.

PAGE 3



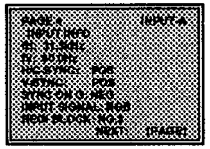
The color temperature, clamp and V-shift adjustment mode settings are displayed.
The selected item blinks in green.
To change the setting, adjust by pressing the ◀, ▶, ▲ and ▼ keys.

COLOR TEMPERATURE: 9300/6500/5400/3200
Select the appropriate color temperature according to your application and the picture source.
The color temperature of the projector is preset to 6500 at the factory.

V-SHIFT: WIDE/NARROW
The V-shift of the projector is preset to WIDE at the factory. When some particular RGB signals are input to projector, the picture may be distorted vertically. In this case, set to NARROW. Adjustable range in the lower direction will become narrow.
If the horizontal frequency of the signal is too high, the V-SHIFT is automatically set to NARROW.
For details of the clamp setting, see "Correcting the Luminance of the Picture – Clamp Setting" on page 87 (E).

Notes
- "CLAMP" and "V-SHIFT" are not displayed when the input mode is VIDEO.
- If the horizontal frequency of the input signal (fH) is more than 100 kHz, V-SHIFT is automatically set to NARROW and its setting is not displayed.

PAGE 4



The signal input conditions are displayed.
fH: Horizontal frequency of the input signal
fV: Vertical frequency of the input signal

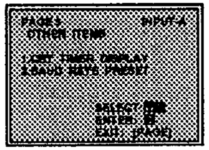
You can select "**POS** (positive)" or "**NEG** (negative)" for following settings:
H/C-SYNC: Polarity of the H/C-SYNC
V-SYNC: Polarity of the V-SYNC
SYNC ON G: Polarity of the SYNC on the Green

•When POS (NEG) is displayed in green:
The picture is being projected using its sync signal.
•When POS (NEG) is displayed in white:
The picture is being projected without using its sync signal.

INPUT SIGNAL: Current input signal
- **Y/C**: S video input signal from the optional IFB-1000 (when installing the optional IFB-1000 to the projector)
- **RGB**: RGB input signal
- **NTSC**: NTSC input signal from the optional IFB-1000 (when installing the optional IFB-1000 to the projector)
- **PAL**: PAL input signal from the optional IFB-1000 (when installing the optional IFB-1000 to the projector)
- **SECAM**: SECAM input signal from the optional IFB-1000 (when installing the optional IFB-1000 to the projector)
- **B & W**: Black and white input signal from the optional IFB-1000 (when installing the optional IFB-1000 to the projector)
- **Internal oscillation**: Internal oscillation mode (No signal is input.)
- **IDTV**: Input signal from the optional IFB-3000 (when installing the optional IFB-3000 to the projector)
- **HDTV**:Input signal from the optional IFB-1300 (when installing the IFB-1300 to the projector)
- **COMPONENT**: Input signal from the optional IFB-1200 (when installing the IFB-1200 to the projector)

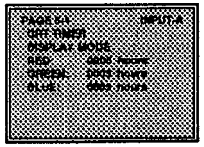
REGI BLOCK: The registration memory block number to which the input signal is assigned.
For details, see the table on page 78 (E).

PAGE 5



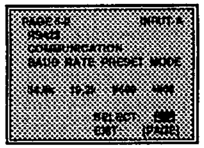
You can select the current usage time display and the baud rate[1] setting display.
The selected item blinks in green.
To display either page, select the item with the ▲ and ▼ keys, and then press the ▶ key.

When the "1. CRT TIMER DISPLAY" is selected



The use time of each cathode-ray tube is displayed in one-hour intervals.
RED: Use time of red CRT
GREEN: Use time of green CRT
BLUE: Use time of blue CRT

When the "2. BAUD RATE PRESET" is selected



The baud rate setting for communication through the RS-422 cable is displayed.
The selected item blinks in green. To change the setting, press the ◀ and ▶ keys.

---

[1] The baud rate setting designates the data communication speed via RS-422 between the projector and computer. Set the appropriate baud rate to match speed of the connected computer.

Screen messages

Color codes

Four colors are used in the letters of on-screen display.

Color	Meaning
Green	Function and condition, item being selected on PAGE display
Cyan	Operation guide and messages
Yellow	Caution and error messages
White	Item being adjusted, item not being selected on PAGE display

Error message

When an error occurs, the following messages will appear.

Message	Meaning
Not applicable!	The key does not function in the current mode.
PIC MUTING	Picture muting mode is on. If you wish to adjust the picture controls, press the PJ MUTING PIC key to cancel the PIC MUTING mode.
Overflow!	The setting is outside the adjustable range limits.
NO INPUT	No signal has been received.
OFF	On-screen display STATUS is set to OFF. To restore the on-screen display, press the STATUS ON key.
Overcorrection	When adjusting registrations, some settings are overcorrected. Reset them to the factory preset data. Then, check that the projector is correctly installed.

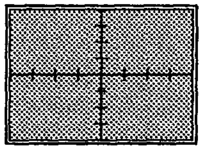
PAGE Displays and Test Patterns

Test Patterns

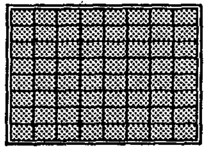
In each adjustment mode, an appropriate test pattern appears. In addition, you can display other test patterns by pressing the TEST key.

List of test patterns

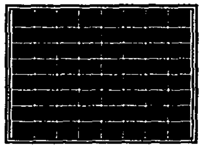
Cross hair



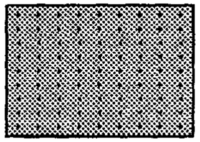
Hatch (9 × 9)



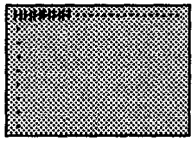
Hatch (reverse)



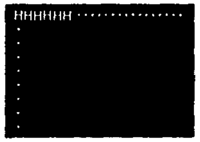
Dot



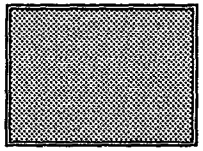
H



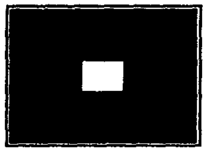
H (reverse) (for adjusting the magnet focus only)



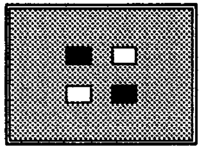
White



Window

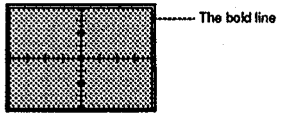


PLUGE[1]



Note

The outside bold line stands for the edge of the screen.



Test pattern in each mode

Mode	By pressing the TEST key, the patterns cycle through the following order.	
Normal	Cross hair → Hatch (9 × 9) → Hatch reverse → Dot → H → White → Window → PLUGE → Cross hair → ...	
Registration		
SIZE LIN SKEW BOW	Cross hair ←→ Hatch (9 × 9)	Select the desired one.
KEY PIN	Hatch (5 × 5) ←→ Hatch (9 × 9)	Select the desired one.
ZONE	Hatch (9 × 9) + Cursor	
White balance		
BIAS	PLUGE	
GAIN	Window ←→ White	
BLKG	Hatch (9 × 9)	
CENT RGB	Cross hair ←→ Hatch (5 × 5)	Select the desired one.
MG (magnetic) FOCUS	H → H (reverse) → Hatch (9 × 9) → Hatch (reverse) → Dot → H → ...	

---

[1] PLUGE is an abbreviation for Picture Line Up Generating Equipment.

Adjusting the Focus

Procedure

Follow the procedure below.

① Remove the front cover. *(page 18 (E))*

⇩

② Set the remote control to the serviceman adjustment mode. *(page 36 (E))*

⇩

③ Select the NO INPUT mode. *(page 49 (E))*

⇩

④ Display the H-pattern. *(page 49 (E))*

⇩

⑤ Reset both CONTR (contrast) and BRT (brightness) levels. *(page 49 (E))*

⇩

⑥ Adjust the green lens focus. *(page 49 (E))*

⇩

⑦ Adjust the green magnetic focus, AQP (Axis Quadrupole) and DQP (Diagonal Quadrupole). *(pages 51 (E) to 54 (E))*
Repeat steps ⑥ and ⑦ until the green CRT focuses.

⇩

⑧ Adjust the red lens focus. *(page 55 (E))*

⇩

⑨ Adjust the red magnetic focus, AQP (Axis Quadrupole) and DQP (Diagonal quadrupole). *(page 55 (E))*
Repeat steps ⑧ and ⑨ until you finish the red focus adjustment.

⇩

⑩ Adjust the blue lens focus. *(page 55 (E))*

⇩

⑪ Adjust the blue magnetic focus, AQP (Axis Quadrupole) and DQP (Diagonal quadrupole). *(page 55)*
Repeat steps ⑩ and ⑪ until you finish the blue focus adjustment.

⇩

Proceed to the registration adjustment.

Adjusting the Green Focus

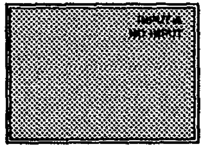
Adjusting the green lens focus

1 Remove the front cover.

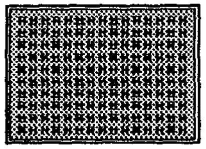
2 Set the remote control to the serviceman adjustment mode.
For details, see "Preparation" on page 36 (E).

3 Press the INPUT SELECT A or B key until "NO INPUT" appears.
Or, set the SWITCHER/INDEX select switch to SWITCHER, and then press a number key from 1 to 8 corresponding to a line that is not connected to a signal.

"NO INPUT" appears on the screen.



4 Press the TEST key on the control until the H-pattern appears.



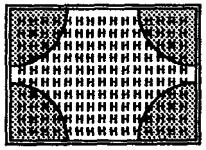
5 Press the RESET so that their adjustment levels are reset. (The CONTR level is 80, and the BRT level is 50.)

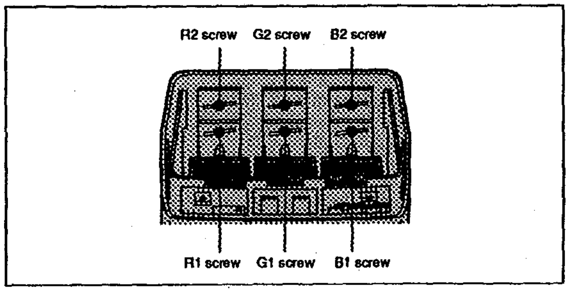
6 Press the CUT OFF R and B keys to display the green signal only.

7 Loosen the G1 screw, slide it so that the letters H at the center of the screen is in focus, and then tighten the screw.

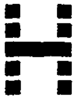
(Continued)

8 Adjust the corner-focus.
Loosen the G2 screw, slide it so that the edge of the letter H at all four corners of the screen (Pay attention to the gray areas illustrated below.) are in focus, and then tighten the screw.
Repeat steps **7** and **8** until the green focus adjustment is completed.





Hint for the lens focus adjustment
The letter "H" is made up of dots. Adjust the focus so that dots of the letter "H" can be clearly seen as illustrated below.



Proceed to the green magnetic focus adjustment.

Adjusting the green magnetic focus

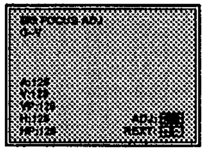
After adjusting the lens focus, adjust the magnetic focus.

1 Press the FOCUS MG key.

The H-pattern appears on the screen, and the center of the screen lights for a moment.

2 Press the ◀ or ▶ key so that the letter H is in focus at the center of the screen.

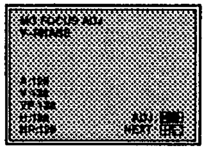
3 Press the POSITION + key until "G-V" appears at the upper left of the screen.



Note

The on-screen display overlaps with the H-pattern.

4 Adjust the focus on the upper and lower sides.
When the upper and lower sides of the screen are in focus, go to step **5**.
① Press the ◀ or ▶ key to set the focus value to MIN.
The H-pattern is de-focused in upper and lower sides of the screen.
② Press the POSITION + key until "V-PHASE" appears on the upper left of the screen.



Notes

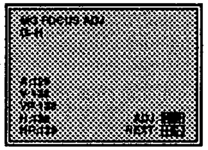
- The on-screen display overlaps with H-pattern.
- When adjusting, pay attention to the areas which blink immediately after you change the adjustment mode.

③ Press the ◀ or ▶ key to de-focus the upper and lower sides of the screen equally.
④ Press the POSITION – key until "G-V" appears on the upper left of the screen.
⑤ Press the ◀ or ▶ key so that the upper and lower sides of the screen are in focus.
Repeat steps ② to ⑤ until the upper and lower sides of the screen are in focus precisely.

(Continued)

Adjusting the Focus

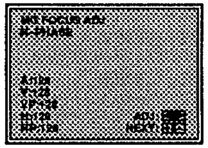
5 Press the POSITION + key until "G-H" appears at the upper left of the screen.



Note

The on-screen display overlaps with the H-pattern.

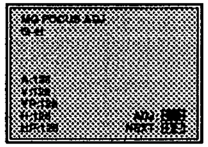
6 Adjust the focus on the right and left sides.
When the right and left sides of the screen are in focus, go to "Adjusting the green AQP/DQP" on next page.
① Press the ◀ or ▶ key to set the focus value to MIN.
The H-pattern is out of focus at the right and left sides of the screen.
② Press the POSITION + key until "H-PHASE" appears at the upper left of the screen.



Notes

- The on-screen display overlaps with the H-pattern.
- When adjusting, pay attention to the areas which blink immediately after you change the adjustment mode.

③ Press the ◀ or ▶ key so that the right and left sides of the screen are equally out of focus.
④ Press the POSITION – key until "G-H" appears at the upper left of the screen.



Note

- The on-screen display overlaps with the H-pattern.

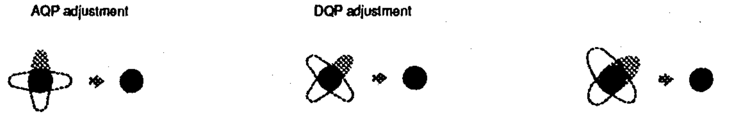
⑤ Press the ◀ or ▶ key so that the right and left sides of the screen are in focus.
Repeat steps ② to ⑤ until the right and left sides of the screen are precisely in focus.

Proceed to the green AQP/DQP adjustment.

Adjusting the green AQP/DQP

After adjusting the magnetic focus, adjust the AQP (Axis Quadrupole) and DQP (Diagonal Quadrupole).

What is the AQP/DQP adjustment?



Correct the vertical or horizontal distortion of the spot.

Correct the diagonal distortion of the spot.

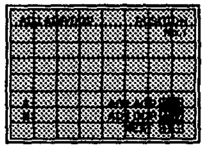
You can also correct the distortion above.

Adjust the AQP and DQP with the following procedure.

1 Press the INPUT SELECT A or B key on the remote control so that "NO INPUT" appears.

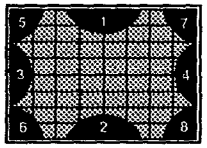
2 Press the FOCUS MG key.

3 Press the POSITION + key until "ADJ AQP/DQP" appears at the upper left of the screen.



(Continued)

4 Correct the focus for the each part of the screen.
① Press the ◀ or ▶ key to optimize the AQP.
② Press the ▲ or ▼ key to optimize the DQP.
③ Press the POSITION + key so that the part to be corrected cycles to the next part of the screen in the order illustrated below.
When you press the POSITION – key, the part to be corrected cycles through the reverse order.
Repeat steps ① to ③ until you correct all the AQP and DQP for every part of the screen.



Proceed to adjust the red lens focus.

Adjusting the Red and Blue Focus

Adjusting the red lens focus

1 Press the CUT OFF G and B keys to display the red signal only.

2 Loosen the R1 screw, slide it so that the letters H at the center of the screen is in focus, and then tighten the screw.
For details, see page 50 (E).

3 Loosen the R2 screw, slide it so that the edge of the letter H at all four corners of the screen (pay attention to the gray areas illustrated below) are in focus, and then tighten the screw.
Repeat steps **2** and **3** until the red focus adjustment is completed.

Proceed to adjust the red magnetic focus, AQP and DQP.

Adjusting the red magnetic focus, AQP and DQP

After adjusting the lens focus, adjust the magnetic focus, AQP and DQP. To adjust them, perform the same procedure as for the green focus adjustment.
For details, see "Adjusting the green magnetic focus" and "Adjusting the green AQP/DQP" on page 51 (E) to 53 (E).

Note

You do not have to adjust the red vertical and horizontal phase for the magnetic focus.

Proceed to adjust the blue focus.

Adjusting the blue lens focus

1 Press the CUT OFF G and R keys to display the blue signal only.

2 Loosen the B1 screw, slide it so that the letters H at the center of the screen is in focus, and then tighten the screw.
For details, see page 50 (E).

3 Loosen the B2 screw, slide it so that the edge of the letter H at all four corners of the screen (pay attention to the gray areas illustrated below) are in focus, and then tighten the screw.
Repeat steps **2** and **3** until the blue focus adjustment is completed.

Adjusting the blue magnetic focus, AQP and DQP

After adjusting the lens focus, adjust the magnetic focus, AQP and DQP. To adjust them, perform the same procedure as for the green focus adjustment.
For details, see "Adjusting the green magnetic focus" and "Adjusting the green AQP/DQP" on page 51 (E) to 53 (E).

Note
You do not have to adjust the blue vertical and horizontal phase for the magnetic focus.

Proceed to adjust the registration.

Adjusting the Registration

Procedure

① Mark the center of the screen. *(page 57 (E))*

↓

② Set the remote control to the serviceman adjustment mode. *(page 36 (E))*

↓

③ Select the NO INPUT mode. *(page 57 (E))*

↓

④ Reset the data to the factory preset level. (Only if the adjustment data has been modified before) *(page 88 (E))*

↓

⑤ Release the blanking adjustment. *(page 59 (E))*

↓

⑥ Adjust the green registration. *(page 61 (E))*
  1 Centering adjustment
  2 SIZE and LIN adjustments
  3 SKEW and BOW adjustments
  4 KEY and PIN adjustments

↓

⑦ Adjust the red registration. *(page 68 (E))*
  1 Centering adjustment
  2 SIZE and LIN adjustments
  3 SKEW and BOW adjustments
  4 KEY and PIN adjustments
  5 ZONE adjustments

↓

⑧ Adjust the blue registration. *(page 75 (E))*
  1 Centering adjustment
  2 SIZE and LIN adjustments
  3 SKEW and BOW adjustments
  4 KEY and PIN adjustments
  5 ZONE adjustment

↓

⑨ Adjust the blanking. *(page 76 (E))*

↓

⑩ Save the adjusted data as the standard data. *(page 77 (E))*

↓

⑪ Adjust fine for each input signal. *(page 80 (E))*
  1 Adjustment of RGB input signal
  2 White balance adjustment

↓

⑫ Activate the protection of the remote control. *(page 91 (E))*

↓

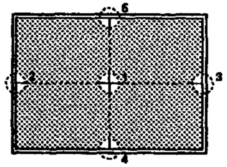
⑬ Adjust the picture. *(page 92 (E))*

↓

Complete

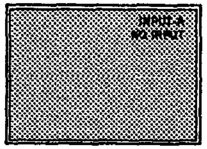
Preparation

1 Mark the center of the screen.
Measure the height and width of the screen to decide the center.
Marking five points with the white tape, as illustrated below, will help you adjust registration.



2 Set the remote control to the serviceman adjustment mode.
For details, see "For Remote Control" on page 36 (E).

3 Press the INPUT SELECT A or B key until "NO INPUT" appears.
Or, set the SWITCHER/INDEX select switch to SWITCHER and then press the number key from 1 to 8, corresponding to a line that is not connected to a signal.


INPUT-A
NO INPUT

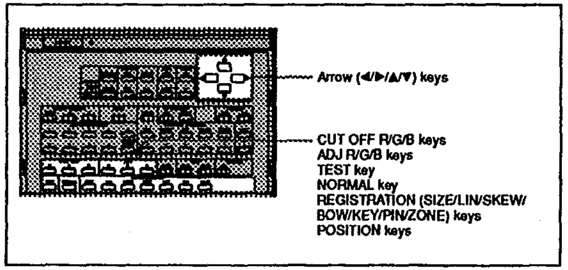
4 Reset the data to the factory preset level.
(Only when you have adjusted the registration and have saved the adjustment data.)
For details, see "Resetting the Data" on page 88 (E).

Notes

- The center of the screen and the center of the cross hair pattern can be aligned by performing the centering adjustment.
  For details, see "Green centering adjustment" on page 61 (E).
- When the optical axis angle is smaller, the hatch pattern becomes trapezoidal. Perform the keystone adjustment to correct the distortion.
  For details, see "Green KEY and PIN adjustments" on page 66 (E).

Adjusting the Registration

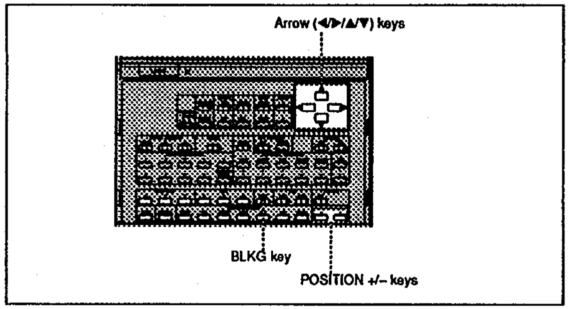
Keys for Adjusting


Arrow (◀/▶/▲/▼) keys
CUT OFF R/G/B keys
ADJ R/G/B keys
TEST key
NORMAL key
REGISTRATION (SIZE/LIN/SKEW/BOW/KEY/PIN/ZONE) keys
POSITION keys

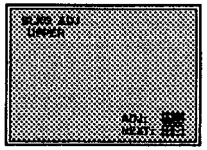
Indicated on the control	Adjustment items
SIZE	Size
LIN	Linearity
SKEW	Skew
BOW	Bow
KEY	Keystone
PIN	Pincushion
ZONE	Centering, zone

Releasing the Blanking

The registration adjustment is difficult if the entire test pattern is not visible. Follow the procedure below to make the whole test pattern visible.



1 Press the BLKG key to enter the blanking adjustment mode.



2 Press the TEST key to display the hatch pattern.

3 Press the POSITION +/– keys to select the part to be adjusted.

- When you press the + key, the position cycles through the following order.

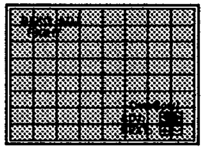
  UPPER → LOWER → LEFT → RIGHT → UPPER → ...

- When you press the – key, the position cycles in reverse order.

(Continued)

4 Press the arrow keys repeatedly until "Overflow!" appears on the screen for each position.

▲:UPPER ▼:LOWER ◄:LEFT ►:RIGHT



What is blanking?

Blanking is used to mask the picture. The picture size of this projector is adjusted at the factory to fit a 120-inch screen. Depending on the installation method, it is necessary to reduce or increase the masking to fit the picture to the screen. Here, reduce the masking to the minimum (the picture is projected at the largest size), and after the registration adjustment is complete, perform the blanking adjustment to fit the screen used.

Note

There may be a rainbow-like vertical band on the right side or a diagonal line on the upper part of the screen. They can be changed with the blanking adjustment later, leave them alone for now.

For details, see "Adjusting the Blanking" on page 76 (E).

Adjusting the Green Registration

Adjust the green registration first.
When adjusting green, do not greatly change the ZONE adjustment. If you change the green ZONE in the large range considerably, the adjustment for red and blue may be difficult.

Green centering adjustment

Adjust so that the center of the test pattern is aligned with the center of the screen.

1 Press the ZONE key.

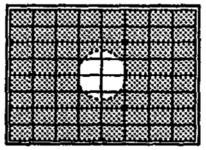
The hatch pattern and the cursor appear.

If the cursor is not centered, use the POSITION key to center the cursor on the screen.

2 Press the ADJ G key.

3 Press the CUT OFF R and B keys to display green only.

4 Press the arrow keys to align the center of the hatch pattern with the center of the screen.



Notes
- For the green centering adjustment, the ZONE adjustment is only for the center zone.
- If the test pattern is off the center of the screen by a large amount, check that the ring spacers are adjusted correctly or that the projector is installed correctly.

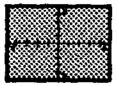
Adjusting the Registration

Green SIZE and LIN (linearity) adjustment

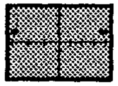
Adjust the picture size with respect to the screen, and the picture's up, down, left and right balance.

1 Press the LIN key.
You can also change to the 9 × 9 hatch pattern by pressing the TEST key.

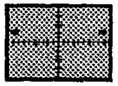
2 Press the ADJ G key.
Pay attention only to the bold lines as illustrated below (the ends of the vertical and horizontal lines).



3 Adjust with the ◀ and ▶ keys until parts (◉) on the right and left are of equal length.



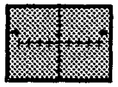
◀: The left and right vertical lines are shifted to the left while the vertical lines remain unmoved.



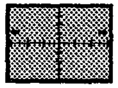
▶: The left and right vertical lines are shifted to the right while the vertical center lines remain unmoved.

4 Press the SIZE key.

5 Adjust with the ◀ and ▶ keys until parts (◉) on the left and right are 15 to 20 mm long.



◀: The horizontal scale is reduced.



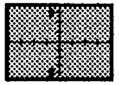
▶: The horizontal scale is expanded.

6 If they are not aligned, press the LIN key and repeat steps **3** to **5**.

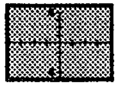
7 If the cross-hair pattern is off-centered on the screen, adjust the centering again and repeat steps **1** to **6** for the horizontal scale adjustment.
For details of the centering adjustment, see "Green centering adjustment" on page 61 (E).

8 Press the LIN key.

9 Adjust with the ▲ and ▼ keys until parts (ⓑ) at the top and bottom are equal length.



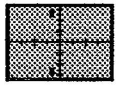
▲: The upper and lower horizontal lines are shifted upward while the horizontal center line remains unmoved.



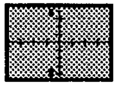
▼: The upper and lower horizontal lines are shifted downward while the horizontal center line remains unmoved.

10 Press the SIZE key.

11 Adjust with the ▲ and ▼ keys until parts (ⓒ) on the top and bottom are about 15 to 20 mm ($^{19}/_{32}$ to $^{13}/_{16}$ inches)long.



▲: The vertical scale is expanded.



▼: The vertical scale is reduced.

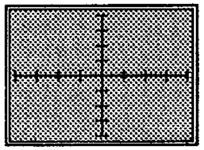
12 If they are not aligned, repeat steps **8** to **11**.

13 If the cross-hair pattern is off-centered on the screen, adjust the centering again and then repeat steps **8** to **12** for the vertical scale adjustment.
For details of the centering adjustment, see "Green centering adjustment" on page 61 (E).

14 After the adjustment is complete, press the MEMORY key to save the adjustment data.

Green SKEW and BOW adjustments

Display the cross pattern and adjust the bow-like or skew distortion of the horizontal and vertical center lines to make them parallel to the screen edges.

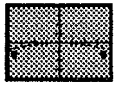


Ⓐ Horizontal line adjustment

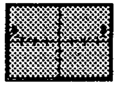
If the horizontal line of the picture is as shown by the dotted line in the illustrations below, adjust it with the corresponding arrow key so that it is perpendicular to the vertical line (bold line).

1 Press BOW key.
You can also change to the 9 × 9 hatch pattern by pressing the TEST key.

2 Adjust the distortion as illustrated below with the ▲ and ▼ keys.



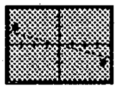
▲: The left and right ends of the horizontal line are adjusted so that they curve upward while the center remains unchanged.



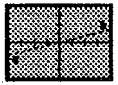
▼: The left and right ends of the horizontal line are adjusted so that they curve downward while the center remains unchanged.

3 Press the SKEW key.

4 Adjust the distortion as illustrated below with the ▲ and ▼ keys.



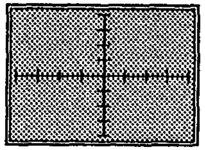
▲: The horizontal line rotates counter-clockwise, rotating around the center.



▼: The horizontal line rotates clockwise, rotating around the center.

5 Repeat steps **1** to **4** until the horizontal lines become parallel to the screen's edges.

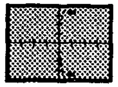
6 When the adjustment is complete, press the MEMORY key to save the adjustment data.



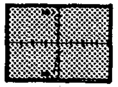
B Vertical line adjustment
If the vertical line of the picture is as shown by the dotted line in the illustrations below, adjust it with the corresponding arrow key so that it is perpendicular to the horizontal line (bold line).

1 Press BOW key.
You can also change to the 9 × 9 hatch pattern by pressing the TEST key.

2 Adjust the distortion as illustrated below with the ◀ and ▶ keys.



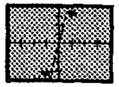
◀: The upper and lower ends of vertical the line are adjusted so that they curve towards the left while the center remains unchanged.



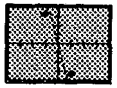
▶: The upper and lower ends of the vertical line are adjusted so that they curve towards the right while the center remains unchanged.

3 Press the SKEW key.

4 Adjust the distortion as illustrated below with the ◀ and ▶ keys.



◀: The vertical line rotates counter-clockwise, rotating around the center.



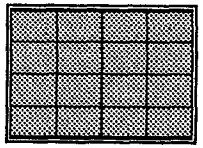
▶: The vertical line rotates clockwise, rotating around the center.

5 Repeat steps **1** to **4** until the vertical lines become parallel to the screen's edges.

6 After the adjustment is complete, press the MEMORY key to save the adjustment data.

Green KEY (keystone) and PIN (pincushion) adjustments

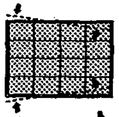
Adjust the trapezoidal distortion and the pin-cushion distortion in the vertical and horizontal directions.



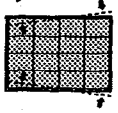
A Horizontal line adjustment
If the picture's boarders are as shown by the dotted line in the illustrations below, adjust it with the corresponding arrow key so that they are parallel (bold line).

1 Press KEY key.
You can also change to the 9 × 9 hatch pattern by pressing the TEST key.

2 Adjust the distortion as illustrated below with the ▲ and ▼ keys.



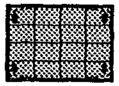
▲: The lines spread apart on the right side and come together on the left side while the center remains unmoved.



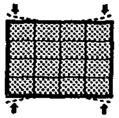
▼: The lines spread apart on the left side and come together on the right side while the center remains unmoved.

3 Press the PIN key.

4 Adjust the distortion as illustrated below with the ▲ and ▼ keys.



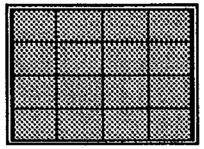
▲: The ends of the top and bottom lines spread apart while the center remains unmoved.



▼: The ends of the top and bottom lines come together while the center remains unmoved.

5 Repeat steps **1** to **4** until the horizontal lines become parallel to the screen edges.

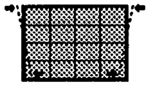
6 After the adjustment is complete, press the MEMORY key to save the adjustment data.



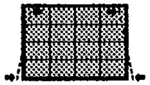
B Vertical line adjustment
If the picture's boarders are as shown by the dotted line in the illustrations below, adjust it with the corresponding arrow key so that they are parallel (bold line).

1 Press the KEY key.

2 Adjust the distortion as illustrated below with the ◀ and ▶ keys.



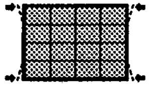
◀: The lines spread apart at the bottom and come together at the top while the center remains unmoved.



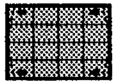
▶: The lines spread apart at the top and come together at the bottom while the center remains unmoved.

3 Press the PIN key.

4 Adjust the distortion as illustrated below with the ◀ and ▶ keys.



◀: The ends of the left and right side lines come together while the center remains unmoved.



▶: The ends of the left and right lines spread apart while the center remains unmoved.

5 Repeat steps **1** to **4** until the vertical lines become parallel to the screen edges.

6 After the adjustment is complete, press the MEMORY key to save the adjustment data.

The green registration adjustment is all completed.
Proceed to the adjustment for the red signal.

Adjusting the Red Registration

Adjust the red signal so that it converges with the green signal and is seen as yellow.

Red centering adjustment

Adjust so that the red test pattern center is aligned with that of the green pattern.

1 Press the ZONE key.

The hatch pattern and the cursor appear.

If the cursor is not centered, press the POSITION key so that the cursor position is at the center of the screen.

2 Press the ADJ R key.

3 Press the CUT OFF B key to display green and red.

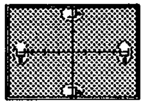
4 Press the arrow keys to align the red hatch pattern center with that of the green pattern.

Note
At this time, adjust the ZONE for the center zone only.

Red SIZE and LIN (linearity) adjustments

1 Press the LIN key.
You can also change to the 9 × 9 hatch pattern by pressing the TEST key.

2 Press the ADJ R key.
Pay attention only to the encircled portions in the illustrations below.



3 Adjust with the ◀ and ▶ keys until the parts (◉) on the left and right are of equal length.
◀: The left and right vertical lines are shifted to the left while the vertical center line remains unmoved.
▶: The left and right vertical lines are shifted to the right while the vertical center line remains unmoved.

4 Press the SIZE key.

5 Adjust with the ◀ and ▶ keys so that the red and green lines in the right and left encircled portions converge.
◀: The horizontal scale is reduced.
▶: The horizontal scale is expanded.

6 If the lines do not converge, press the LIN key and then repeat steps **3** to **5**.

7 If the cross-hair pattern is off-centered on the screen, adjust the centering again and repeat steps 1 to 6 for the horizontal scale adjustment.
For details of the centering adjustment, see "Red centering adjustment" on page 68 (E).

8 Press the LIN key.

9 Adjust with the ▲ and ▼ keys until parts (ⓑ) at the top and bottom are of equal length.
▲: The upper and lower horizontal lines are shifted upward while the horizontal center line remains unmoved.
▼: The upper and lower horizontal lines are shifted downward while the horizontal center line remains unmoved.

10 Press the SIZE key.

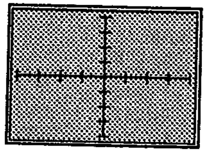
11 Adjust with the ▲ and ▼ keys so that the red and green lines at the top and bottom circled portions converge.
▲: The vertical scale is expanded.
▼: The vertical scale is reduced.

12 If the lines do not converge, repeat steps **8** to **11**.

13 If the cross-hair pattern is off-centered on the screen, adjust the centering again and repeat steps **8** to **12** for the vertical scale adjustment.
For details of the centering adjustment, see "Red centering adjustment" on page 68 (E).

14 After the adjustment is complete, press the MEMORY key to save the adjustment data.

Red SKEW and BOW adjustments

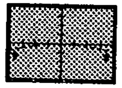


Ⓐ Horizontal line adjustment

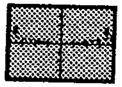
If the horizontal line of the picture is as shown by the dotted line in the illustrations below, adjust it with the corresponding arrow key so that it is perpendicular to the vertical line (bold line).

1 Press BOW key.
You can also change to the 9 × 9 hatch pattern by pressing the TEST key.

2 Adjust the distortion as illustrated below with the ▲ and ▼ keys.



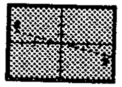
▲: The left and right ends of the horizontal line are adjusted so that they curve upward while the center remains unchanged.



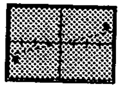
▼: The right and left ends of the horizontal line are adjusted so that they curve downward while the center remains unchanged.

3 Press the SKEW key.

4 Adjust the distortion as illustrated below with the ▲ and ▼ keys.



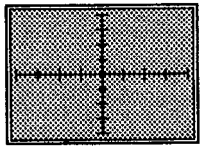
▲: The horizontal line rotates counter-clockwise, rotating around the center.



▼: The horizontal line rotates clockwise, rotating around the center.

5 Repeat steps **1** to **4** until the red horizontal line converges with the green line.

6 When the adjustment is complete, press the MEMORY key to save the adjustment data.

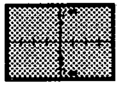


B Vertical line adjustment

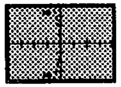
If the vertical line of the picture is as shown by the dotted line in the illustrations below, adjust it with the corresponding arrow key so that it is perpendicular to the vertical line (bold line).

1 Press BOW key.
You can also change to the 9 × 9 hatch pattern by pressing the TEST key.

2 Adjust the distortion as illustrated below with the ◄ and ► keys.



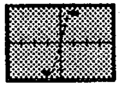
◄: The upper and lower ends of the vertical line are adjusted so that they curve towards the left while the center remains unchanged.



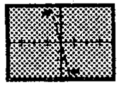
►: The upper and lower ends of the vertical line are adjusted so that they curve towards the right while the center remains unchanged.

3 Press the SKEW key.

4 Adjust the distortion as illustrated below with the ◄ and ► keys.



◄: The vertical line rotates counter-clockwise, rotating around the center.



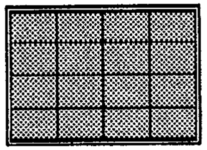
►: The vertical line rotates clockwise, rotating around the center.

5 Repeat steps **1** to **4** until the red vertical line converges with the green line.

6 When the adjustment is complete, press the MEMORY key to save the adjustment data.

Adjusting the Registration

Red KEY (keystone) and PIN (pincushion) adjustments

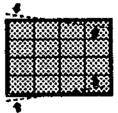


A Horizontal line adjustment

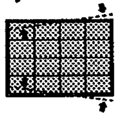
If the picture's boarders are as shown by the dotted line in the illustrations below, adjust it with the corresponding arrow key so that they are parallel (bold line).

1 Press the KEY key.
You can also change to the 9 × 9 hatch pattern by pressing the TEST key.

2 Adjust the distortion as illustrated below with the ▲ and ▼ keys.



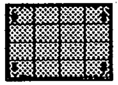
▲: The lines spread apart on the right side and come together on the left side while the center remains unmoved.



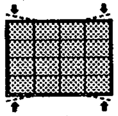
▼: The lines spread apart on the left side and come together on the right side while the center remains unmoved.

3 Press the PIN key.

4 Adjust the distortion as illustrated below with the ▲ and ▼ keys.



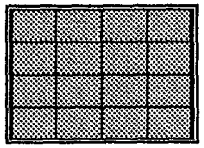
▲: The ends of the top and bottom lines spread apart while the center remains unmoved.



▼: The ends of the top and bottom lines come together while the center remains unmoved.

5 Repeat steps **1** to **4** until the red horizontal lines converge with the green lines.

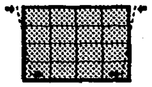
6 After the adjustment is complete, press the MEMORY key to save the adjustment data.



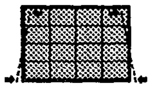
B Vertical line adjustment
If the picture's boarders are as shown by the dotted line in the illustrations below, adjust it with the corresponding arrow key so that they are parallel (bold line).

1 Press the KEY key.
You can also change to the 9 × 9 hatch pattern by pressing the TEST key.

2 Adjust the distortion as illustrated below with the ◀ and ▶ keys.



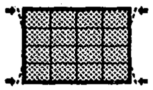
◀: The lines spread apart at the bottom and come together at the top while the center remains unmoved.



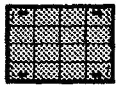
▶: The lines spread apart at the top and come together at the bottom while the center remains unmoved.

3 Press the PIN key.

4 Adjust distortion as illustrated below with the ◀ and ▶ keys.



◀: The ends of the left and right side lines come together while the center remains unmoved.



▶: The ends of the left and right lines spread apart while the center remains unmoved.

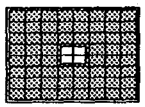
5 Repeat steps **1** to **4** until the vertical lines converge with the green lines.

6 After the adjustment is complete, press the MEMORY key to save the adjustment data.

Red ZONE adjustment

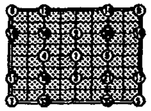
Adjust ZONE after the red lines have converged with the green lines.
Before adjusting ZONE, you should have completed the adjustments described in pages 68 (E) to 73 (E).

1 Press the ZONE key.
The hatch pattern and the cursor appear.



2 Press the POSITION key to select the part to be adjusted.

When you press the + key, the cursor moves in the numerical order as illustrated.
When you press the – key, the cursor moves in the reverse order.
The selected position number appears in the upper right corner.



3 Adjust the red line distortion in the cursor positioning area with the arrow keys.

4 After the adjustment is complete, press the MEMORY key to save the adjustment data.

The registration adjustment is complete.
Proceed to the registration adjustment of the blue signal.

Adjusting the Blue Registration

Adjust the blue signal so that it converges with the red signal which has been adjusted. When the blue and red test patterns converge, the pattern is seen as magenta.

Blue centering adjustment

Adjust so that the blue test pattern center is aligned with that of the red pattern.

1 Press the ZONE key.

The hatch pattern and the cursor appear.

If the cursor is not centered, press the POSITION key so that the cursor position is at the center of the screen.

2 Press the ADJ B key.

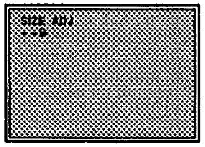
3 Press the CUT OFF G key to display blue and red.

4 Press the arrow keys to align the blue hatch pattern center with that of the green pattern.

Note
At this time, adjust the ZONE for center zone only.

Blue SIZE, LIN (linearity), SKEW, BOW, KEY (keystone), PIN (pincushion) and ZONE adjustments

Adjust so that the blue signal converges with the red signal in each adjustment. The procedures are the same as for adjusting the red registration.
For details, see pages 68 (E) to 74 (E).
Make sure that "ADJ B" appears on the screen when adjusting the blue signal.

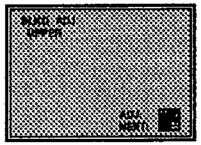


After the blue adjustment is complete, press the MEMORY key to save the adjustment data.

Adjusting the Blanking

After adjusting the registration, adjust the blanking to erase the rainbow-like vertical band on the right side or a diagonal line in the upper part of the screen.

1 Press the BLKG key.



2 Press the TEST key to display the hatch pattern.

3 Press the POSITION +/– key to select the part to be adjusted.

- When you press the + key, the position cycles through the following order:

  UPPER →LOWER → LEFT → RIGHT → UPPER ...

- When you press the – key, the position cycles in reverse order.

4 Adjust with the arrow keys.

- Press the ▲ and ▼ keys to adjust the UPPER and LOWER parts.

  The diagonal line in the upper part will disappear with the UPPER adjustment.

- Press the ◀ and ▶ keys to adjust the LEFT and RIGHT parts.

  The rainbow-like vertical band on the right side will disappear with the RIGHT adjustment.

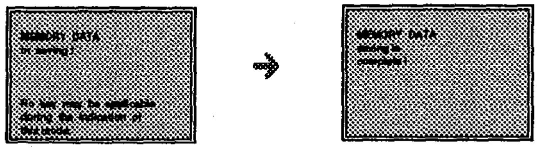
5 After the adjustment is complete, press the MEMORY key to save the adjustment data.

Saving the Standard Registration Data

After adjusting all the registrations for the green, red and blue signals, save the adjustment data as the standard data for the projector.

1 Press the MEMORY key and release it.

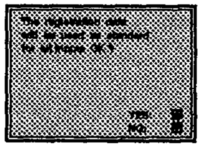
The adjustment data is saved in the memory as an internal signal with a horizontal frequency of approximately 34 kHz.


MEMORY DATA

MEMORY DATA

2 Hold down the MEMORY key for more than 3 seconds.

The message appears and the projector enters the standard data saving mode.


YES:
NO:

3 Press the ▲ key (for YES).

All the registration data will be converted into the internal signal data and are saved as standard data.

Notes
- All keys except for the MEMORY key do not function while saving the data.
- If the adjustment data is saved as the standard data, the registration data with other horizontal frequencies will be converted into the standard data if they have not been saved before.

Adjusting the Registration

Memory structure

This projector saves the adjustment data in one of eight memory blocks, on the horizontal frequency of the input signal.
The divided registration memory blocks are provided for each of acceptable horizontal frequency, as below.

Registration memory block	Horizontal frequency (fH)
1	15 kHz – 20 kHz
2	20 kHz – 32 kHz
3	32 kHz – 45 kHz
4	45 kHz – 58 kHz
5	58 kHz – 73 kHz
6	73 kHz – 85 kHz
7	85 kHz – 105 kHz
8	105 kHz – 135 kHz

When a signal is input, the projector automatically recognizes its horizontal frequency and selects the appropriate memory blocks.
When adjusting registrations without input signal, the registration is adjusted with the projector's internal signal; horizontal frequency of approximately 34 kHz. So the adjustment data is saved in registration memory block 3, in this case.
If the adjustment data is saved as the standard data, the factory preset data for all of the memory blocks will be changed to reflect the new settings. Since the standard data in the current installation condition is saved, you can easily adjust each input signal next time.
The following steps show the typical procedure for how to use the standard data and when to save the data.

1 After installation, adjust registrations without an input signal and save the adjustment data.

2 Save the adjustment data as the standard data.

3 Adjust for each input signal and save the adjustment data.

For reference – Memory architecture

	Contents	Data source	How to save the data
Channel memory	Picture control	Input channel	Press the MEMORY key. Switch the input connector. Turn the projector off with the remote control.
Status memory	RGB SIZE, SHIFT Blanking Clump Color temperature V-SHIFT	H/ V frequency of the input signal Sync signal status	Press the MEMORY key. Turn the projector off with the remote control.
Registration memory	Registration Magnetic focus	Registration memory block (Horizontal frequency of the input signal)	Press the MEMORY key. Switch the input connector. Change the horizontal frequency.
Color temperature memory	W/B Bias and gain	Color temperature setting	Turn the projector off with the remote control.

One projector can store only one value in memory for AQP, DQP, baud rate, CRT timer and STATUS ON/OFF.

Note

After the adjustment is complete, be sure to press the MEMORY key or turn the projector off with the remote control.

Fine Adjustment for Each Input Signal

After the registration adjustment is performed without an input source and the adjustment data is saved as the standard data, input an external signal and fine adjust for each input signal.

Adjusting the Video Input Signal

1 Connect to the PC-1271M Signal Interface Switcher with the IFB-1000 Signal Interface Board.

2 Set the SWITCHER/INDEX select switch to SWITCHER, and then designate the input source number by pressing the number keys from 1 to 8.

3 Press the PAGE key repeatedly until PAGE 4 appears.
Check that the horizontal frequency of the input signal ("fH") indicates 15.7 kHz.

4 Adjust the magnetic focus for each input signal.

Fine magnetic focus adjustment

1 Press the TEST key to display the H pattern.

2 If necessary, fine adjust the magnetic focus.
For details of the adjustment procedure, see "Adjusting the green magnetic focus" on page 51 (E).

3 Press the MEMORY key to save the adjustment data.

Notes

- Do not hold down the MEMORY key for a few seconds.
- When you adjust the input signal corresponding to the registration memory blocks 1 and 2, the blue and red magnetic focus automatically becomes out of focus immediately after the magnetic focus adjustment mode is canceled.
  With this function, you can obtain the picture which has the optimized white/black balance.
- When you give priority to the spot focus over the white balance of the picture, adjust the magnetic focus to the level you can get by subtracting the value listed in the table below from the optimized magnetic focus level.

	Color temperature							
	9300		6500		5400		3200	
Values of magnetic focus	BLUE ALL	RED ALL	BLUE ALL	RED ALL	BLUE ALL	RED ALL	BLUE ALL	RED ALL
Block 1	+40	−10	+40	−10	+40	−10	±0	−10
Block 2	+20	±0	+20	±0	+20	±0	±0	±0

Example

- Color temperature: 9300
- Registration memory block: block 1
- Red adjustment focus level: 130

To optimize the picture, subtract the value above from the adjustment level.

130 – (–10) =140

Therefore, adjust the red magnetic focus level to 140.

Fine registration adjustment

1. Press the TEST key to display the hatch pattern.
2. If necessary, fine adjust the registrations.
   For details of the adjustment procedure, see "Adjusting the Registration" on pages 56 (E) to 79 (E).
3. Press the MEMORY key to save the adjustment data.

SIZE adjustment

Adjust the picture size if it does not fit on the screen.

1. Press the RGB SIZE key.
2. Adjust the picture size with the arrow keys.
   ▲: The vertical size is expanded.
   ▼: The vertical size is reduced.
   ▶: The horizontal size is expanded.
   ◀: The horizontal size is reduced.
3. Press the MEMORY key to save the adjustment data.

Blanking adjustment

If the displayed picture is larger than the screen, cut off the excess parts.

1. Press the BLKG key.
2. Press the POSITION +/– key to select the part to be adjusted.
   - When you press the + key, the position cycles through the following order:

     UPPER → LOWER → LEFT → RIGHT → UPPER...

   - When you press the – key, the position cycles in reverse order.
3. Adjust with the arrow keys.
   - Press the ▲ and ▼ keys to adjust the UPPER and LOWER positions.
   - Press the ◀ and ▶ keys to adjust the LEFT and RIGHT positions.
4. Press the MEMORY key to save the adjustment data.

Note

When you connect multiple video input sources to the projector, such as the switcher, adjust the picture size and blanking for each signal input source.

Fine Adjustment for Each Input Signal

Adjusting the RGB Input Signal

1. Connect to the RGB IN connector on the projector or the PC-1271M Signal Interface Switcher with the optional interface board.
2. Press the INPUT SELECT A or B key on the remote control. Or, set the SWITCHER/INDEX select switch to SWITCHER, and then designate the input source number by pressing the number keys from 1 to 8.
3. Press the PAGE key repeatedly until PAGE 4 appears to check the horizontal frequency ("fH") of the input signal.
   If "fH" shows 32 – 45 kHz (the range of registration memory block 3), you do not need to fine adjust.
4. Adjust the magnetic focus for each input signal.
   For details, see "Adjusting the green magnetic focus" on page 51 (E).

Fine magnetic focus adjustment

1. Press the TEST key to display the H pattern.
2. If necessary, fine adjust the magnetic focus.
   For details of the adjustment procedure, see "Adjusting the green magnetic focus" on page 51 (E).
3. Press the MEMORY key to save the adjustment data.

Fine registration adjustment

1. Press the TEST key to display the hatch pattern.
2. If necessary, fine adjust registrations.
   For details of the adjustment procedure, see "Adjusting the Registration" on pages 56 (E) to 79 (E).
3. When you connect the multiple RGB input sources, group them according to the horizontal frequency by checking the "fH" on PAGE 4.
4. Fine adjust registrations for each group.
   Press the MEMORY key and release it to save the adjustment data.
   The adjusted data will be saved normally.

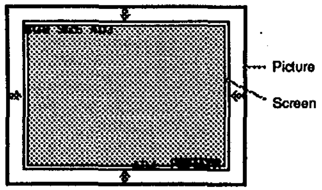
Hint for the adjustment
The projector saves the registration adjustment data in one of eight registration memory blocks according to the horizontal frequency of the input signals. *(For details, see "Memory structure" on page 78 (E).)* When multiple signals are used, you need to fine adjust registrations for each block. If multiple input signal are grouped into the same memory block, adjust for any one of them. You can check in which block the signal is grouped with PAGE 4. *(For details, see page 43 (E).)*

RGB SIZE adjustment

Adjust the picture size if it does not fit the screen.

1 *Press the RGB SIZE key.*

2 Adjust the picture size with the arrow keys.
▲: The vertical size is expanded.
▼: The vertical size is reduced.
▶: The horizontal size is expanded.
◀: The horizontal size is reduced.



3 Press the MEMORY key to save the adjustment data.

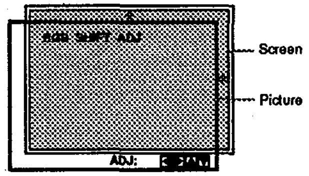
Fine Adjustment for Each Input Signal

RGB SHIFT adjustment

If the picture needs to be shifted to fit on the screen, adjust the RGB SHIFT.

1 Press the RGB SHIFT key.

2 Adjust the shift with the arrow keys.
▲: The picture size is shifted upward.
▼: The picture size is dhifted downward.
◀: The picture size is leftward.
▶: The picture size is rightward.



3 Press the MEMORY key to save the adjustment data.

Blanking adjustment

If the displayed picture is larger than the screen, cut off the excess parts.

1 Press the BLKG key.

2 Press the POSITION +/– key to select the part to be adjusted.

- When you press the + key, the position cycles through the following order:

  UPPER → LOWER → LEFT → RIGHT → UPPER ...

- When you press the – key, the position cycles in reverse order.

3 Adjust with the arrow keys.
• Press the ▲ and ▼ keys to adjust the UPPER and LOWER positions.
• Press the ◀ and ▶ keys to adjust the LEFT and RIGHT positions.

4 Press the MEMORY key to save the adjustment data.

Note
When you connect multiple video input sources to the projector, such as the switcher, adjust the picture size, shift and blanking for each RGB signal that needs different characteristics. The characteristics are shown in PAGE 4.

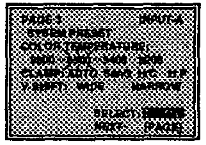
Adjusting the White Balance

The color temperatures are preset at the factory to 9300K, 6500K, 5400K and 3200K. However, if you change these levels or set a color temperature other than the factory-preset levels, you can adjust the white balance and save it in the memory.

Setting the white balance

1 Display the same input signal on the projector and the color monitor.

2 Press the PAGE key repeatedly until PAGE 3 appears.



3 Press the arrow key to select 9300, 6500, 5400 or 3200, the nearest color temperature to that of the color monitor or the desired one. Normally set to 6500. Select the appropriate color temperature according to your application and the picture source.

4 Press the MEMORY key to save the adjustment data.

Adjusting the white balance

If you wish to make the color of a particular input signal (eg.HDTV system picture) uniform to that of the color monitor, you can adjust the white balance.
Display the same input signal on the projector and the monitor.

Adjusting the black level

1 Press the W/B BIAS key.

The PLUGE pattern appears.
The contrast and the brightness levels of the projector are automatically set to 80 and 50 respectively.

2 Hold down the TEST key for more than 5 minutes.

"WHITE BALANCE BIAS ADJ" appears at the upper left of the screen.

3 Press the ADJ R, G or B key to select the color to be adjusted.
When selecting the color, pay attention to the black part of the picture displayed on the screen and note which color stands out compared to that of the monitor.

(Continued)

4 Press the ◀ or ▶ key so that the black part in the picture on the screen looks the same as that of the monitor.
If the brightness of that part does not look the same as that of the monitor, adjust the other colors by pressing the ADJ R, G or B key and arrow keys.

5 Press the MEMORY key to save the adjustment data.

Adjusting the white level

1 Press the W/B GAIN key.

The window pattern appears.
The contrast and the brightness levels of the projector are automatically set to 80 and 50, respectively.

2 Hold down the TEST key for more than 5 minutes.

"WHITE BALANCE GAIN ADJ" appears at the upper left of the screen.

3 Press the ADJ R, G or B key to select the color to be adjusted.
When selecting the color, pay attention to the white part of the picture displayed on the screen and note which color stands out compared to that of the monitor.

4 Press the ◀ or ▶ key so that the white part in the picture on the screen looks the same as that of the monitor.
If the brightness does not look the same as that of the monitor, adjust the other colors by pressing the ADJ R, G or B key and the arrow keys.

5 Press the MEMORY key to save the adjustment data.

When using multiple projectors

Input the same signal to the based projector and the projector to be adjusted.
Set COLOR TEMPERATURE on PAGE 3 display to the same position on both projectors, and then operate the procedures described above to make the black and white colors uniform between the based projector and the projector to be adjusted.

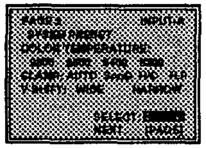
Notes

- When adjusting the white balance, use the external color monitor for the reference of the color.
- To adjust the white balance easily, set the STATUS in the PAGE 1 to OFF so that the on-screen display disappears when adjusting the white balance.
- You can adjust the white balance more easily if you set the COLOR level to MIN to display the black and white picture.

Correcting the Luminance of the Picture – Clamp Setting

Clamp is used as a standard for setting the black level of the picture correctly. The standard position of the clamp depends on the kind of the sync signal. Normally the CPU judges the signal and sets the clamp position automatically.
However, the CPU may misjudge the signal because of noise. If the luminance of the picture seems to be incorrect (too dark, the black color is too light, or the luminance is unstable), the clamp position may need to be changed.
Change the clamp position following the procedure below.

1 Press the PAGE key repeatedly until the PAGE 3 appears.



2 Select the clamp position by pressing the ◀, ▶, ▲ and ▼ keys.
AUTO: Automatic setting mode. Normally, set to this position.
S on G: If the black color is too light or seems to be green, set to this position.
H/C: If the picture is too dark or the luminance is unstable, set to this position.
H.P: If the luminance is still incorrect after changing the clamp setting to "S on G" or "H/C", set to this position and perform the H-SHIFT adjustment.

3 Press the MEMORY key to store the adjustment data.

If the luminance is still incorrect after changing the clamp setting

There may be a problem with the input signal or the connection. Check the input signal.

Resetting the Data

There are two ways to reset the data; the data reset and factory preset value.

Data reset
The data is reset to the previously saved data (the data before the adjustment).

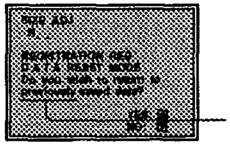
Factory preset
The data is reset to the factory preset value. You can reset to the factory preset values only after a data reset.

Resetting the Data

1 Select the adjustment mode to be reset.

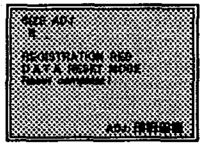
2 Press the ◀ and ▶ keys simultaneously.

The following display appears.



Check that "previously" appears here.
(eg. To reset all the red indication adjustment data to the previously saved data)

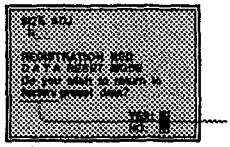
3 Press the ▲ key.



All the red registration adjustment data will be reset to the previously saved data.
(Previous data reset)

4 Press the ◀ and ▶ keys simultaneously again.

The following display appears.



Check that "factory" appears here.
(eg. To reset all the red indication adjustment data to the factory preset level)

5 Press the ▲ key.

All red registration adjustment data will be reset to the factory preset level.
(Factory preset)

Resetting the Standard Data to the Factory Preset Levels

If you wish to adjust and save the registration data, reset the data to the factory preset levels before adjusting the registration.

1 Press the CENT R and B keys simultaneously to enter the green centering adjustment mode.

2 Follow the steps **2** to **5** on pages 88 (E) to 89 (E).

The centering adjustment data of the red, green and blue signals are reset to the factory preset levels.

3 Press the SIZE key.

4 Press the ADJ G key, and then execute the factory preset.

The SIZE, LIN, SKEW, BOW, KEY, PIN and ZONE adjustment data of the green signal is reset to the factory preset levels.

5 Press the ADJ R key, and then execute the factory preset.

The SIZE, LIN, SKEW, BOW, KEY, PIN and ZONE adjustment data of the red signal are reset to the factory preset levels.

6 Press the ADJ B key, and then execute the factory preset.

The SIZE, LIN, SKEW, BOW, KEY, PIN and ZONE adjustment data of the blue signal are reset to the factory preset levels.

7 Press the BLKG key.

(Continued)

8 Press the TEST key, and then execute the factory preset.

The UPPER, LOWER, LEFT and RIGHT blanking adjustment data are reset to the factory preset levels.

The standard data are reset to the factory preset levels.
Then start adjusting the registration.

For reference – Mode data reset correspondence

Mode	Data to be reset
RGB size	H-size and V-size
RGB shift	H-shift and V-shift
G-centering	Centering data for all colors
R-centering	Not applicable
B-centering	Not applicable
Size, Linearity Skew, Bow Keystone Pincushion	All the registration data for the selected color (including the Zone data)
Zone	Zone data for the selected color is set to the middle adjustment level (128).
Blanking	UPPER/LOWER/LEFT/RIGHT side blanking data
Gain, Bias	All the Bias and Gain data for all colors at the current color temperature
Magnetic focus	Magnetic focus data for the memory block corresponding to the current horizontal frequency (fH)
AQP/DQP	All the AQP/DQP data

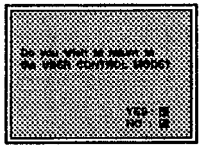
ZONE data reset

The ZONE data reset allows to set the ZONE data of all the positions to 128, middle adjustment level. Reset the ZONE data if wavelike distortion occurs with the outermost line of the hatch pattern or the red and blue lines do not converge when adjusting registration (only when the projector is not installed on the floor using a 120-inch front type screen). After resetting the ZONE data, adjust the KEY and PIN and then adjust the ZONE again.

Protecting the Setting

When you turn off the projector with the remote control, the adjustment keys become inoperable in order to prevent the users from accidentally changing the registration adjustments.
It is also possible to make the keys inoperable while the power is on in the following way.

1 Hold down the NORMAL key for at least 3 seconds.



2 Press the ▲ key.

The adjustment keys are now inoperable.

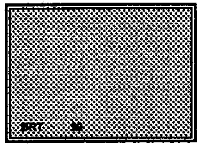
Adjusting the Picture Quality

Adjust the picture for your preference. The adjustment data can be saved in the memory.

1 Adjust with the PICTURE CONTROL +/– keys.

CONTR	**Picture contrast**
COLOR	Color intensity
BRT	Brightness
SHARP	Sharpness
HUE	Hue

The adjustment levels are digitally displayed with a range of MIN, 1, 2, ... 99, MAX.

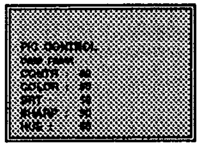


2 Press the MEMORY key to save the data.

Restoring the factory preset levels

Press the RESET key.

The factory preset levels appear on the screen.



Notes
- The COLOR, SHARP and HUE keys do not function on the pictures input from the RGB IN connectors.
- The HUE and COLOR keys do not function if the input signal is black and white.
- The HUE key does not function with the PAL or SECAM color input source.

Dynamic picture mode (only for the video input pictures)
You can get high quality picture contrast by switching the DYNAMIC PIC SW or the BA board.
For details, see "Setting the Dynamic Picture" on page 25 (E).

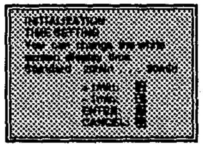
Changing the Initialization Period

You can set the desired warm up time for the projector in 1 minute increments.

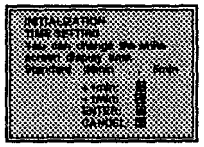
1 Set the remote control to the serviceman adjustment mode.
For details, see "For Remote Control" on page 36 (E).

2 Hold down the POWER ON key on the remote control for 5 seconds.

The following display appears.



3 Press the ◀ and ▶ keys to set the desired minutes.
◀: Increases by 1 minute.
▶: Decreases by 1 minute.



4 Press the ▲ key.

The display disappears.

To cancel the setting
Press the ▼ key instead of the ▲ key in step 4 above.

To set it so that the signal input from the connected equipment appears on the screen immediately after the power is turned on
Set the initializing period to "0 min".

Turning off the "OFF" indication on the Screen

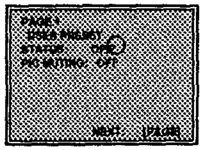
Even when you set "STATUS" setting in the PAGE 1 to OFF, "OFF" indication is still displayed on the screen.
To turn it off, follow the procedure below.

1 Press the PAGE key until the PAGE 1 display appears.

2 Press the STATUS OFF key.

3 Hold down the STATUS OFF key for more than 5 seconds.

An asterisk (*) appears as illustrated below.



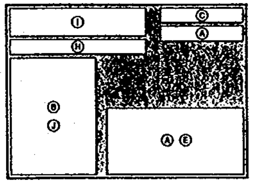
Asterisk (*) appears.

To turn on "OFF" indication
Press the STATUS OFF key until the asterisk (*) disappears.

VPH-1292Q/QM MODEL ONLY

List of Messages

Use the list below to check the meaning of the messages displayed on the screen.
The list is divided into sections according to the location which the message appears. First check the location in the following diagram, then refer to the alphabetic listing to find the message.



Ⓓ, Ⓕ, Ⓖ and Ⓚ listed below appear all over on the screen.

A Caution messages

• Not applicable!	• The key does not function in the current mode.
• Overflow!	• The setting is outside the adjustable range limits.
• PIC MUTING	• Picture muting mode is on.
• Input is not VIDEO.	• The input signal is not VIDEO.
• Input is not NTSC.	• The input signal is not NTSC.
• Input is not RGB.	• The input signal is not RGB.
• Input is B & W.	• The input signal is black and white.
• OFF	• On-screen display STATUS is set to OFF.
• NO INPUT	• No input signal
• Overcorrection	• When adjusting registrations, some settings are overcorrected.

B PIC CONTROL data

• CONTR (CONTRAST)	• Contrast
• COLOR	• Color
• BRT (BRIGHTNESS)	• Brightness
• SHARP (SHARPNESS)	• Sharpness
• HUE	• Hue
• PIC CONTROL data reset	• Resets the PIC CONTROL data.

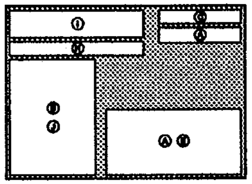
C Input signal

• VIDEO	• Input from VIDEO IN
• INPUT-A	• Input from RGB IN
• INPUT-B	• Input from an optional interface board
• SW'ER x-y (switcher x=1-2, y=1-8)	• Input from an optional switcher
• ID No.xx	• The ID number of the optional IFB-101 (when the IFB-101 is installed.)
• OTHER	• An optional switcher is in the OTHER mode.

VPH-1292QMG MODEL ONLY

List of Messages

Use the list below to check the meaning of the messages displayed on the screen.
The list is divided into sections according to the location which the message appears. First check the location in the following diagram, then refer to the alphabetic listing to find the message.



Ⓓ, Ⓕ, Ⓖ and Ⓚ listed below appear all over on the screen.

A Caution messages

• Not applicable!	• The key does not function in the current mode.
• Overflow!	• The setting is outside the adjustable range limits.
• PIC MUTING	• Picture muting mode is on.
• Input is not VIDEO.	• The input signal is not VIDEO.
• Input is not NTSC.	• The input signal is not NTSC.
• Input is not RGB.	• The input signal is not RGB.
• Input is B & W.	• The input signal is black and white.
• OFF	• On-screen display STATUS is set to OFF.
• NO INPUT	• No input signal
• Overcorrection	• When adjusting registrations, some settings are overcorrected.

B PIC CONTROL data

• CONTR (CONTRAST)	• Contrast
• COLOR	• Color
• BRT (BRIGHTNESS)	• Brightness
• SHARP (SHARPNESS)	• Sharpness
• HUE	• Hue
• PIC CONTROL data reset	• Resets the PIC CONTROL data.

C Input signal

• INPUT-A	• Input from RGB IN
• INPUT-B	• Input from an optional interface board
• SW'ER x-y (switcher x=1-2, y=1-8)	• Input from an optional switcher
• ID No.xx	• The ID number of the optional IFB-101 (when the IFB-101 is installed.)
• OTHER	• An optional switcher is in the OTHER mode.

List of Messages

D PAGE

Subtitle

• USER PRESET	• User preset
• USER CONTROL	• User control
• SYSTEM PRESET	• System preset
• INPUT INFO (INPUT INFORMATION)	• Input information

PAGE 1

• STATUS ON/OFF	• On-screen display on/off
• PIC MUTING ON/OFF	• Picture muting mode on/off

PAGE 2

• CONTR (CONTRAST)	• Contrast
• COLOR	• Color
• BRT (BRIGHTNESS)	• Brightness
• SHARP (SHARPNESS)	• Sharpness
• HUE	• Hue
• PIC CONTROL data reset	• Resets the PIC CONTROL data.

PAGE 3

• COLOR TEMPERATURE: 9300/6500/5400/3200	• Color temperature is set to 9300/6500/5400/3200 manually adjusted by Qualified Sony Service Personnel.
• CLAMP: AUTO / S on G / H/C / H.P	• Clamp position is set to automatic/internal/external sync signal/horizontal deflection pulse position.
• V-SHIFT: WIDE/NARROW	• The adjustable range of vertical shift is wide/narrow.

PAGE 4

• INPUT SIGNAL	• Input signal
• Y/C	• S video input signal from VIDEO IN
• RGB	• RGB input signal
• NTSC	• NTSC input signal from VIDEO IN
• PAL	• PAL input signal from VIDEO IN
• SECAM	• SECAM input signal from VIDEO IN
• B & W	• Black and white input signal from VIDEO IN
• IDTV	• IDTV input signal from the IFB-3000
• HDTV	• HDTV input signal from the IFB-1300
• COMPONENT	• Component input signal from the IFB-1200

List of Messages

D PAGE

Subtitle

• USER PRESET	• User preset
• USER CONTROL	• User control
• SYSTEM PRESET	• System preset
• INPUT INFO (INPUT INFORMATION)	• Input information

PAGE 1

• STATUS ON/OFF	• On-screen display on/off
• PIC MUTING ON/OFF	• Picture muting mode on/off

PAGE 2

• CONTR (CONTRAST)	• Contrast
• COLOR	• Color
• BRT (BRIGHTNESS)	• Brightness
• SHARP (SHARPNESS)	• Sharpness
• HUE	• Hue
• PIC CONTROL data reset	• Resets the PIC CONTROL data.

PAGE 3

• COLOR TEMPERATURE: 9300/6500/5400/3200	• Color temperature is set to 9300/6500/5400/3200 manually adjusted by Qualified Sony Service Personnel.
• CLAMP: AUTO / S on G / H/C / H.P	• Clamp position is set to automatic/internal/external sync signal/horizontal deflection pulse position.
• V-SHIFT: WIDE/NARROW	• The adjustable range of vertical shift is wide/narrow.

PAGE 4

• INPUT SIGNAL	• Input signal
• Y/C	• S video input signal from the IFB-1000
• RGB	• RGB input signal
• NTSC	• NTSC input signal from the IFB-1000
• PAL	• PAL input signal from the IFB-1000
• SECAM	• SECAM input signal from the IFB-1000
• B & W	• Black and white input signal from the IFB-1000
• IDTV	• IDTV input signal from the IFB-3000
• HDTV	• HDTV input signal from the IFB-1300
• COMPONENT	• Component input signal from the IFB-1200

• fH	• Horizontal frequency
• fV	• Vertical frequency
• Internal oscillation	• Internal oscillation mode (No signal is input.)
• H/C-SYNC	• Horizontal sync signal or composite sync signal
• V-SYNC	• Vertical sync signal
• SYNC ON G	• Composite sync signal
• H/C-SYNC: POS/NEG/ ---	• The polarity of the H/C-SYNC is positive/negative/not input.
• V-SYNC:POS/NEG/ ---	• The polarity of the V-SYNC is positive/negative/not input.
• SYNC ON G:NEG/ ---	• The polarity of the SYNC ON G is negative/not input.
• REGI BLOCK: No.x	• The input signal is grouped into the registration memory block No.x.

PAGE 5

• 1. CRT TIMER DISPLAY	• CRT use time display mode
• 2. BAUD RATE PRESET	• Baud rate setting display

PAGE 5-1

• CRT TIMER DISPLAY MODE RED: xxxx hours GREEN: xxxx hours BLUE: xxxx hours	• CRT use time display mode • Red CRT use time: xxxx hours • Green CRT use time: xxxx hours • Blue CRT use time: xxxx hours

PAGE 5-2

• RS-422 COMMUNICATION BAUD RATE PRESET MODE 38.4K/19.2K/ 9600/4800	• The baud rate is set to 38.4k/19.2k/9600/4800 baud when communicating via the RS-422.

E Operation

• YES: ▲	• Press ▲ for "Yes".
• NO: ▼	• Press ▼ for "No".
• SELECT: ◀ ▶	• Press ◀ or ▶ key to select.
• SELECT: ◀ ▶ ▲ ▼	• Press ◀, ▶, ▲ or ▼ key to select.
• ADJ: ◀ ▶ ▲ ▼	• Press ◀, ▶, ▲ or ▼ key to adjust.
• ADJ: ◀ ▶	• Press ◀ or ▶ key to adjust.
• ADJ: ▲ ▼	• Press ▲ or ▼ key to adjust.
• NEXT: [+] [–]	• Press [+] key to move the cursor to the next position. • Press [–] key to move the cursor to the previous position.
• NEXT: [PAGE]	• Press PAGE key to go to the next page.
• EXIT: [PAGE]	• Press PAGE key to exit the PAGE mode.
• EXIT: [NORMAL]	• Press NORMAL key to exit the TEST mode.
• ENTER: ▶	• Press ▶ key to execute the selected item.
• ENTER: ▲	• Press ▲ key to execute the selected item.
• CANCEL: ▼	• Press ▼ key to cancel the setting.

List of Messages

F Memory data

• MEMORY DATA in saving	• Saving data in memory.
• MEMORY DATA saving is complete!	• Saving data in memory is completed.
• No key may be applicable during the indication of this mode	• When in this mode (MEMORY DATA saving), no key functions.
• The registration data will be used as standard for all inputs OK?	• Is it OK to use the stored data as the standard data for all inputs?

G Data reset

• Do you wish to return to factory preset data?	• Do you wish to reset the data to the factory preset data?
• Do you wish to return to previously saved data?	• Do you wish to reset the data to the previously saved data?
• Reset complete!	• Resetting has been completed.
• RGB SIZE DATA RESET MODE	• RGB or video input size data resetting mode
• RGB SHIFT DATA RESET MODE	• RGB input shift data resetting mode
• BLANKING DATA RESET MODE	• Blanking data resetting mode
• CENTERING ALL COLOR DATA RESET MODE	• Centering data (all colors) resetting mode
• W/B GAIN & BIAS ALL COLOR DATA RESET MODE	• Gain and Bias (all colors) data resetting mode
• REGISTRATION (RED/GREEN/ BLUE) DATA RESET MODE	• Registration (red, green or blue) data resetting mode

H Raster

• RASTER R G B	• Red, green and blue are projected.
• RASTER R – –	• Only red is projected.
• RASTER – G –	• Only green is projected.
• RASTER – – B	• Only blue is projected.
• RASTER R G –	• Red and green are projected.
• RASTER R – B	• Red and blue are projected.
• RASTER – G B	• Green and blue are projected.

I Adjustment

• RGB SIZE ADJ	• RGB or video input size adjustment mode
• RGB SHIFT ADJ	• RGB input shift adjustment mode
• R CENT ADJ	• Red centering adjustment mode
• G CENT ADJ	• Green centering adjustment mode
• B CENT ADJ	• Blue centering adjustment mode
• SIZE ADJ	• Size adjustment mode
• fine	• Picture size fine adjustment mode for green
• LIN (LINEARITY) ADJ	• Linearity adjustment mode
• SKEW ADJ	• Skew adjustment mode
• BOW ADJ	• Bow adjustment mode

• **KEY (KEYSTONE) ADJ**	• Keystone adjustment mode
• **PIN (PINCUSHION) ADJ**	• Pincushion adjustment mode
• **ZONE ADJ**	• Zone adjustment mode
• **BLKG ADJ UPPER/LOWER/LEFT/ RIGHT**	• Blanking adjustment (upper, lower, left, or right) mode
• **BIAS ADJ**	• White balance bias adjustment mode
• **GAIN ADJ**	• White balance gain adjustment mode
• **MG FOCUS ADJ**	• Magnetic focus adjustment mode
• **ADJ AQP/DQP**	• AQP/DQP adjustment mode

J Adjustment data

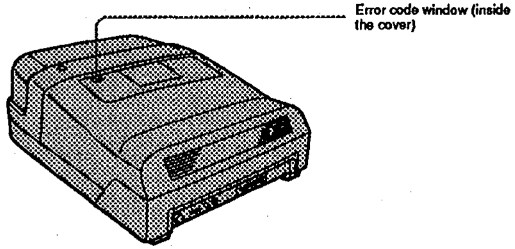
• **H: xxx**	• Horizontal adjustment level (xxx = MIN, 1, 2, ... 254, 255, MAX)
• **V: xxx**	• Vertical adjustment level (xxx = MIN, 1, 2, ... 254, 255, MAX)
• **Hf: xxx**	• Centering adjustment level for horizontal direction (xxx = MIN, 1, 2, ... 254, 255, MAX) Use the arrow keys to increment or decrement this number.
• **Hc: xxx**	• Centering adjustment level for horizontal direction (xxx = MIN, 1, 2, ... 254, 255, MAX) Use the arrow keys to increment or decrement this number.
• **Vf: xxx**	• Centering adjustment level for vertical direction (xxx = MIN, 1, 2, ... 254, 255, MAX) Use the arrow keys to increment or decrement this number.
• **Vc: xxx**	• Centering adjustment level for vertical direction (xxx = MIN, 1, 2, ... 254, 255, MAX) Use the arrow keys to increment or decrement this number.
• **A: xxx**	• General settings of magnetic focus adjustment level (xxx = MIN, 1, 2, ... 254, 255, MAX) Use the arrow keys to increment or decrement this number.
• **VP: xxx**	• Magnetic focus adjustment level for the vertical phase (V-phase) (xxx = MIN, 1, 2, ... 254, 255, MAX) Use the arrow keys to increment or decrement this number.
• **HP: xxx**	• Magnetic focus adjustment level for the horizontal phase (H-phase) (xxx = MIN, 1, 2, ... 254, 255, MAX) Use the arrow keys to increment or decrement this number.
• **A: xxx**	• AQP adjustment level (xxx = MIN, 1, 2, ... 254, 255, MAX) Use the arrow keys to increment or decrement this number.
• **D: xxx**	• DQP adjustment level (xxx = MIN, 1, 2, ... 254, 255, MAX) Use the arrow keys to increment or decrement this number.

K Others

• **For optimum performance, white screen will remain for 20 min. For immediate use, push [PAGE] key.**	• For optimum performance, white screen will remain for 20 min. For immediate use, press the PAGE key.
• **INITIALIZATION TIME SETTING**	• Initialization time setting mode
• **You can change the white screen display time.**	• You can change the white screen display time. Standard 20 min ... xx min.
• **Do you wish to enter into the SERVICEMAN CONTROL MODE?**	• Do you wish to enter into the service personnel control mode?
• **Do you wish to return to the USER CONTROL MODE?**	• Do you wish to return to the user control mode?
• **PROTECT MODE ON!** **You cannot enter into the SERVICEMAN CONTROL MODE.**	• You cannot enter the serviceman control mode because the remote control is protected.

About error codes

When a critical operational error occurs, the power will be automatically turned off and the error code will light up on the error code window inside the front cover. You can check the code without removing the cover. Refer to the chart below for the meanings.



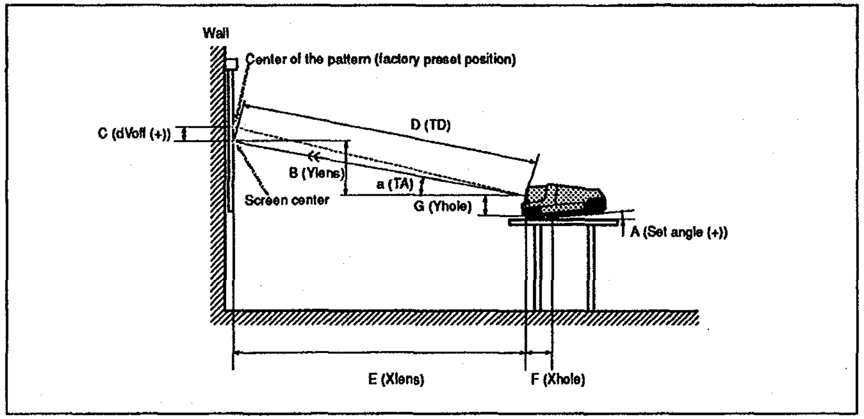
Y: Error occurrence

Error Code	FAN stop	(H stop) 115V down	IK-over	V-stop	HV-over	Power down
01.....	Y	–	–	–	–	–
02.....	–	Y	–	–	–	–
03.....	Y	Y	–	–	–	–
04.....	–	–	Y	–	–	–
05.....	Y	–	Y	–	–	–
06.....	–	Y	Y	–	–	–
07.....	Y	Y	Y	–	–	–
08.....	–	–	–	Y	–	–
09.....	Y	–	–	Y	–	–
0A.....	–	Y	–	Y	–	–
0b.....	Y	Y	–	Y	–	–
0C.....	–	–	Y	Y	–	–
0d.....	Y	–	Y	Y	–	–
0E.....	–	Y	Y	Y	–	–
0_.....	Y	Y	Y	Y	–	–
10.....	–	–	–	–	Y	–
11.....	Y	–	–	–	Y	–
12.....	–	Y	–	–	Y	–
13.....	Y	Y	–	–	Y	–
14.....	–	–	Y	–	Y	–
15.....	Y	–	Y	–	Y	–
16.....	–	Y	Y	–	Y	–
17.....	Y	Y	Y	–	Y	–
18.....	–	–	–	Y	Y	–
19.....	Y	–	–	Y	Y	–
1A.....	–	Y	–	Y	Y	–
1b.....	Y	Y	–	Y	Y	–
1C.....	–	–	Y	Y	Y	–
1d.....	Y	–	Y	Y	Y	–
1E.....	–	Y	Y	Y	Y	–
1_.....	Y	Y	Y	Y	Y	–
20.....	–	–	–	–	–	Y

Notes

- When the error code lights up, all the previous adjustment data will be cleared.
- The error code disappears when the MAIN POWER switch is turned off and the power cord is disconnected.
- The error code lights up every time the power is turned on until the critical operational error cause is returned to normal.

List of the Projection Distance by Angle of Optical Axis



Unit: mm (inches) for F Xhole and G Yhole only

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	–1°	–2°
B / E	0.2419	0.2126	0.1944	0.1763	0.1584	0.1405	0.1228	0.1051	0.0875	0.0699	0.0524	0.0349	0.0175	0.0000	–0.0175	–0.0349
A Angle	0.0°	1.6°	2.6°	3.6°	4.5°	5.4°	6.4°	7.3°	8.2°	9.1°	10.0°	10.9°	11.9°	12.8°	13.7°	14.6°
F Xhole	247.4 (9 3/4)	254.5 (10 1/8)	258.9 (10 1/4)	263.2 (10 3/8)	267.3 (10 5/8)	271.1 (10 3/4)	274.9 (10 7/8)	278.6 (11)	282.2 (11 1/8)	285.8 (11 3/8)	289.2 (11 1/2)	292.6 (11 5/8)	296.0 (11 3/4)	299.2 (11 7/8)	302.4 (12)	305.5 (12 1/8)
G Yhole	262.0 (10 3/8)	255.1 (10 1/8)	250.7 (9 7/8)	246.1 (9 3/4)	241.7 (9 5/8)	237.4 (9 3/8)	233.0 (9 1/4)	228.5 (9)	224.1 (8 7/8)	219.5 (8 3/4)	214.9 (8 1/2)	210.3 (8 3/8)	205.6 (8 1/8)	200.8 (8)	196.0 (7 3/4)	191.1 (7 5/8)

When using the 90 inch screen

Unit: mm (inches)

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	–1°	–2°
E Xlens	2515 (99 1/8)	2529 (99 5/8)	2536 (99 7/8)	2543 (100 1/8)	2549 (100 3/8)	2554 (100 5/8)	2558 (100 3/4)	2562 (100 7/8)	2565 (101)	2567 (101 1/8)	2569 (101 1/4)	2570 (101 1/4)	2570 (101 1/4)	2570 (101 1/4)	2569 (101 1/4)	2568 (101 1/8)
B Ylens	606 (23 7/8)	538 (21 1/4)	493 (19 1/2)	448 (17 3/4)	404 (16)	359 (14 1/4)	314 (12 3/8)	269 (10 5/8)	224 (8 7/8)	180 (7 1/8)	135 (5 3/8)	90 (3 5/8)	45 (1 13/16)	0 (0)	–45 (–1 13/16)	–90 (–3 5/8)
D TD	2587 (101 7/8)	2585 (101 7/8)	2584 (101 3/4)	2582 (101 3/4)	2581 (101 5/8)	2579 (101 5/8)	2577 (101 1/2)	2576 (101 1/2)	2575 (101 3/8)	2574 (101 3/8)	2573 (101 3/8)	2572 (101 1/4)	2571 (101 1/4)	2570 (101 1/4)	2570 (101 1/4)	2569 (101 1/4)
C dVoff	0 (0)	0 (0)	0 (0)	0 (0)	3 (1/8)	7 (9/32)	10 (13/32)	14 (9/16)	17 (11/16)	21 (27/32)	24 (31/32)	28 (1 1/8)	32 (1 5/16)	35 (1 7/16)	39 (1 9/16)	42 (1 11/16)
Spacer																
Red–L	–10	–9	–8	–7	–6	–5	–4	–2.5	–1	0	1	2	2.5	2.5	3	3
Red–C	15.5	15	15	15.5	16	16.5	17.5	–17.5	–16	–14.5	–13.5	–12.5	–11.5	–10.5	–9.5	–9
Green–L	–12.5	–11.5	–11	–10.5	–10.5	–10	–9.5	–9.5	–9	–8.5	–8	–8	–7.5	–7	–6.5	–6.5
Green–C	12.5	11.5	11	10.5	10.5	10	9.5	9.5	9	8.5	8	8	7.5	7	6.5	6.5
Blue–L	10	9	8	7	6	5	4	2.5	1	0	–1	–2	–2.5	–2.5	–3	–3
Blue–C	–15.5	–15	–15	–15.5	–16	–16.5	–17.5	17.5	16	14.5	13.5	12.5	11.5	10.5	9.5	9

When using the 100 inch screen

Unit: mm (inches)

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	–1°	–2°
🄴 Xlens	2768 (109)	2783 (109 5/8)	2791 (110)	2799 (110 1/4)	2805 (110 1/2)	2811 (110 3/4)	2816 (110 7/8)	2820 (111 1/8)	2823 (111 1/4)	2826 (111 1/4)	2827 (111 3/8)	2829 (111 3/8)	2829 (111 3/8)	2829 (111 3/8)	2828 (111 3/8)	2826 (111 3/8)
🄱 Ylens	667 (26 3/8)	592 (23 3/8)	543 (21 1/2)	494 (19 1/2)	444 (17 1/2)	395 (15 5/8)	346 (13 5/8)	296 (11 3/4)	247 (9 3/4)	198 (7 7/8)	148 (5 7/8)	99 (4)	49 (1 15/16)	0 (0)	–49 (–1 15/16)	–99 (–4)
🄳 TD	2847 (112 1/8)	2845 (112 1/8)	2844 (112)	2842 (112)	2840 (111 7/8)	2839 (111 7/8)	2837 (111 3/4)	2835 (111 5/8)	2834 (111 5/8)	2833 (111 5/8)	2831 (111 1/2)	2830 (111 1/2)	2829 (111 1/2)	2829 (111 3/8)	2828 (111 3/8)	2828 (111 3/8)
🄲 dVoff	0 (0)	0 (0)	0 (0)	0 (0)	3 (1/8)	7 (9/32)	11 (7/16)	15 (19/32)	19 (3/4)	23 (29/32)	27 (1 1/8)	31 (1 1/4)	35 (1 7/16)	39 (1 9/16)	43 (1 3/4)	47 (1 7/8)
Spacer																
Red–L	–9.5	–8.5	–7.5	–6.5	–5.5	–4.5	–3	–1.5	0	1	2	2.5	3	3.5	3.5	3.5
Red–C	14.5	14.5	14.5	15	15.5	16.5	17.5	–17	–15.5	–14	–13	–12	–11	–10	–9.5	–9
Green–L	–12	–11	–11	–10.5	–10	–9.5	–9.5	–9	–9	–8.5	–8	–8	–7.5	–7	–7	–6.5
Green–C	12	11	11	10.5	10	9.5	9.5	9	9	8.5	8	8	7.5	7	7	6.5
Blue–L	9.5	8.5	7.5	6.5	5.5	4.5	3	1.5	0	–1	–2	–2.5	–3	–3.5	–3.5	–3.5
Blue–C	–14.5	–14.5	–14.5	–15	–15.5	–16.5	–17.5	17	15.5	14	13	12	11	10	9.5	9

When using the 110 inch screen

Unit: mm (inches)

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	–1°	–2°
🄴 Xlens	3025 (119 1/8)	3041 (119 3/4)	3050 (120 1/8)	3058 (120 1/2)	3065 (120 3/4)	3071 (121)	3077 (121 1/8)	3081 (121 3/8)	3085 (121 1/2)	3087 (121 5/8)	3089 (121 3/4)	3091 (121 3/4)	3091 (121 3/4)	3091 (121 3/4)	3090 (121 3/4)	3088 (121 5/8)
🄱 Ylens	729 (28 3/4)	646 (25 1/2)	593 (23 3/8)	539 (21 1/4)	486 (19 1/8)	432 (17 1/8)	378 (15)	324 (12 7/8)	270 (10 3/4)	216 (8 5/8)	162 (6 1/2)	108 (4 3/8)	54 (2 1/4)	0 (0)	–54 (–2 1/4)	–108 (–4 3/8)
🄳 TD	3111 (122 1/2)	3109 (122 1/2)	3107 (122 3/8)	3106 (122 3/8)	3104 (122 1/4)	3102 (122 1/8)	3100 (122 1/8)	3098 (122)	3096 (122)	3095 (121 7/8)	3094 (121 7/8)	3093 (121 7/8)	3092 (121 3/4)	3091 (121 3/4)	3090 (121 3/4)	3090 (121 3/4)
🄲 dVoff	0 (0)	0 (0)	0 (0)	0 (0)	3 (1/8)	7 (9/32)	11 (7/16)	16 (21/32)	20 (13/16)	25 (1)	29 (1 3/16)	33 (1 5/16)	38 (1 1/2)	42 (1 11/16)	47 (1 7/8)	51 (2 1/8)
Spacer																
Red–L	–9	–8	–7.5	–6.5	–5	–4	–2.5	–0.5	1	2	3	3.5	3.5	4	4	4
Red–C	14	14	14.5	15	15.5	16.5	18	–16.5	–15	–13.5	–12.5	–11.5	–10.5	–10	–9	–8.5
Green–L	–11.5	–11	–10.5	–10	–10	–9.5	–9	–9	–8.5	–8.5	–8	–8	–7.5	–7	–7	–6.5
Green–C	11.5	11	10.5	10	10	9.5	9	9	8.5	8.5	8	8	7.5	7	7	6.5
Blue–L	9	8	7.5	6.5	5	4	2.5	0.5	–1	–2	–3	–3.5	–3.5	–4	–4	–4
Blue–C	–14	–14	–14.5	–15	–15.5	–16.5	–18	16.5	15	13.5	12.5	11.5	10.5	10	9	8.5

List of the Projection Distance by Angle of Optical Axis

When using the 120 inch screen

Unit: mm (inches)

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	–1°	–2°
🄴 Xlens	3279 (129 1/8)	3297 (129 7/8)	3307 (130 1/4)	3316 (130 5/8)	3324 (130 7/8)	3330 (131 1/8)	3336 (131 3/8)	3341 (131 5/8)	3344 (131 3/4)	3347 (131 7/8)	3350 (131 7/8)	3351 (132)	3351 (132)	3351 (132)	3350 (132)	3348 (131 7/8)
🄱 Ylens	791 (31 1/4)	701 (27 5/8)	643 (25 3/8)	585 (23 1/8)	526 (20 3/4)	468 (18 1/2)	410 (16 1/4)	351 (13 7/8)	293 (11 5/8)	234 (9 1/4)	176 (7)	117 (4 5/8)	59 (2 3/8)	0 (0)	–59 (–2 3/8)	–117 (–4 5/8)
🄳 TD	3373 (132 7/8)	3371 (132 3/4)	3369 (132 3/4)	3367 (132 5/8)	3365 (132 1/2)	3363 (132 1/2)	3361 (132 3/8)	3359 (132 1/4)	3357 (132 1/4)	3356 (132 1/8)	3354 (132 1/8)	3353 (132 1/8)	3352 (132)	3351 (132)	3350 (132)	3350 (132)
🄲 dVoff	0 (0)	0 (0)	0 (0)	0 (0)	3 (1/8)	7 (9/32)	12 (1/2)	17 (11/16)	22 (7/8)	27 (1 1/8)	31 (1 1/4)	36 (1 7/16)	41 (1 5/8)	46 (1 13/16)	51 (2 1/8)	56 (2 1/4)
Spacer																
Red–L	–9	–8	–7	–6	–4.5	–3	–1.5	0	1.5	3	3.5	4	4	4.5	4.5	4.5
Red–C	13.5	14	14	14.5	15.5	16.5	–17.5	–16	–14.5	–13	–12	–11	–10	–9.5	–9	–8.5
Green–L	–11	–10.5	–10	–10	–9.5	–9.5	–9	–9	–8.5	–8.5	–8	–7.5	–7.5	–7	–7	–6.5
Green–C	11	10.5	10	10	9.5	9.5	9	9	8.5	8.5	8	7.5	7.5	7	7	6.5
Blue–L	9	8	7	6	4.5	3	1.5	0	–1.5	–3	–3.5	–4	–4	–4.5	–4.5	–4.5
Blue–C	–13.5	–14	–14	–14.5	–15.5	–16.5	17.5	16	14.5	13	12	11	10	9.5	9	8.5

When using the 130 inch screen

Unit: mm (inches)

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	–1°	–2°
🄴 Xlens	3570 (140 5/8)	3589 (141 3/8)	3600 (141 3/4)	3610 (142 1/4)	3618 (142 1/2)	3625 (142 3/4)	3632 (143)	3637 (143 1/4)	3641 (143 3/8)	3644 (143 1/2)	3647 (143 5/8)	3648 (143 3/4)	3649 (143 3/4)	3648 (143 3/4)	3647 (143 5/8)	3645 (143 1/2)
🄱 Ylens	861 (34)	763 (30 1/8)	700 (27 5/8)	637 (25 1/8)	573 (22 5/8)	510 (20 1/8)	446 (17 5/8)	382 (15 1/8)	319 (12 5/8)	255 (10 1/8)	191 (7 5/8)	127 (5)	64 (2 5/8)	0 (0)	–64 (–2 5/8)	–127 (–5)
🄳 TD	3673 (144 5/8)	3670 (144 1/2)	3668 (144 1/2)	3666 (144 3/8)	3664 (144 5/32)	3661 (144 1/4)	3659 (144 1/8)	3657 (144)	3655 (144)	3653 (143 7/8)	3652 (143 7/8)	3650 (143 3/4)	3649 (143 3/4)	3648 (143 3/4)	3647 (143 5/8)	3647 (143 5/8)
🄲 dVoff	0 (0)	0 (0)	0 (0)	0 (0)	3 (1/8)	8 (11/32)	13 (17/32)	19 (3/4)	24 (31/32)	29 (1 3/16)	34 (1 3/8)	39 (1 9/16)	45 (1 13/16)	50 (2)	55 (2 1/4)	60 (2 3/8)
Spacer																
Red–L	–8.5	–7.5	–6.5	–5.5	–4	–2.5	–0.5	1.5	2.5	3.5	4	4.5	4.5	5	5	5
Red–C	13	13.5	14	14.5	15.5	17	–17	–15	–13.5	–12	–11.5	–10.5	–10	–9.5	–9	–8.5
Green–L	–10.5	–10.5	–10	–9.5	–9.5	–9	–9	–8.5	–8.5	–8	–8	–7.5	–7.5	–7	–7	–6.5
Green–C	10.5	10.5	10	9.5	9.5	9	9	8.5	8.5	8	8	7.5	7.5	7	7	6.5
Blue–L	8.5	7.5	6.5	5.5	4	2.5	0.5	–1.5	–2.5	–3.5	–4	–4.5	–4.5	–5	–5	–5
Blue–C	–13	–13.5	–14	–14.5	–15.5	–17	17	15	13.5	12	11.5	10.5	10	9.5	9	8.5

When using the 140 inch screen

Unit: mm (inches)

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	–1°	–2°
E Xlens	3861 (152 1/8)	3882 (152 7/8)	3894 (153 3/8)	3904 (153 3/4)	3913 (154 1/8)	3921 (154 3/8)	3927 (154 5/8)	3933 (154 7/8)	3938 (155 1/8)	3941 (155 1/4)	3944 (155 3/8)	3945 (155 3/8)	3946 (155 3/8)	3946 (155 3/8)	3944 (155 3/8)	3942 (155 1/4)
B Ylens	932 (36 3/4)	825 (32 1/2)	757 (29 7/8)	688 (27 1/8)	620 (24 1/2)	551 (21 3/4)	482 (19)	413 (16 3/8)	345 (13 5/8)	276 (10 7/8)	207 (8 1/4)	138 (5 1/2)	69 (2 3/4)	0 (0)	–69 (–2 3/4)	–138 (–5 1/2)
D TD	3972 (156 3/8)	3969 (156 1/4)	3967 (156 1/4)	3965 (156 1/8)	3962 (156)	3959 (156)	3957 (155 7/8)	3955 (155 3/4)	3953 (155 5/8)	3951 (155 5/8)	3949 (155 1/2)	3948 (155 1/2)	3947 (155 3/8)	3946 (155 3/8)	3945 (155 3/8)	3944 (155 3/8)
C dVoff	0 (0)	0 (0)	0 (0)	0 (0)	4 (3/16)	9 (3/8)	15 (19/32)	20 (13/16)	26 (1 1/16)	31 (1 1/4)	37 (1 1/2)	42 (1 11/16)	48 (1 15/16)	54 (2 1/4)	59 (2 3/8)	65 (2 5/8)
Spacer																
Red–L	–8.5	–7	–6	–5	–3.5	–1.5	0.5	2.5	3.5	4.5	4.5	5	5	5	5	5
Red–C	13	13.5	14	14.5	16	18	–16	–14	–12.5	–11.5	–11	–10	–9.5	–9	–8.5	–8
Green–L	–10.5	–10	–10	–9.5	–9.5	–9	–9	–8.5	–8.5	–8	–8	–7.5	–7.5	–7	–7	–6.5
Green–C	10.5	10	10	9.5	9.5	9	9	8.5	8.5	8	8	7.5	7.5	7	7	6.5
Blue–L	8.5	7	6	5	3.5	1.5	–0.5	–2.5	–3.5	–4.5	–4.5	–5	–5	–5	–5	–5
Blue–C	–13	–13.5	–14	–14.5	–16	–18	16	14	12.5	11.5	11	10	9.5	9	8.5	8

When using the 150 inch screen

Unit: mm (inches)

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	–1°	–2°
E Xlens	4166 (164 1/8)	4188 (165)	4201 (165 1/2)	4212 (165 7/8)	4222 (166 1/4)	4230 (166 5/8)	4237 (166 7/8)	4243 (167 1/8)	4248 (167 3/8)	4252 (167 1/2)	4255 (167 5/8)	4257 (167 5/8)	4257 (167 5/8)	4257 (167 5/8)	4255 (167 5/8)	4253 (167 1/2)
B Ylens	1005 (39 5/8)	890 (35 1/8)	817 (32 1/4)	743 (29 3/8)	669 (26 3/8)	595 (23 1/2)	520 (20 1/2)	446 (17 5/8)	372 (14 3/4)	297 (11 3/4)	223 (8 7/8)	149 (5 7/8)	74 (3)	0 (0)	–74 (–3)	–149 (–5 7/8)
D TD	4285 (168 3/4)	4282 (168 5/8)	4280 (168 1/2)	4277 (168 1/2)	4275 (168 3/8)	4272 (168 1/4)	4269 (168 1/4)	4267 (168)	4265 (168)	4263 (167 7/8)	4261 (167 3/4)	4259 (167 3/4)	4258 (167 5/8)	4257 (167 5/8)	4256 (167 5/8)	4255 (167 5/8)
C dVoff	0 (0)	0 (0)	0 (0)	0 (0)	5 (7/32)	11 (7/16)	16 (21/32)	22 (7/8)	28 (1 1/8)	34 (1 3/8)	40 (1 5/8)	46 (1 13/16)	52 (2 1/8)	58 (2 3/8)	64 (2 5/8)	70 (2 7/8)
Spacer																
Red–L	–8	–7	–6	–4.5	–2.5	0	2	3.5	4.5	5	5	5.5	5.5	5.5	5.5	5.5
Red–C	12.5	13	14	15	17	–17	–15	–13	–12	–11	–10.5	–10	–9.5	–9	–8.5	–8
Green–L	–10	–10	–9.5	–9.5	–9	–9	–8.5	–8.5	–8.5	–8	–8	–7.5	–7.5	–7	–7	–7
Green–C	10	10	9.5	9.5	9	9	8.5	8.5	8.5	8	8	7.5	7.5	7	7	7
Blue–L	8	7	6	4.5	2.5	0	–2	–3.5	–4.5	–5	–5	–5.5	–5.5	–5.5	–5.5	–5.5
Blue–C	–12.5	–13	–14	–15	–17	17	15	13	12	11	10.5	10	9.5	9	8.5	8

List of the Projection Distance by Angle of Optical Axis

When using the 160 inch screen

Unit: mm (inches)

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	–1°	–2°
E Xlens	4444 (175)	4467 (176)	4481 (176 1/2)	4493 (177)	4503 (177 3/8)	4512 (177 3/4)	4520 (178)	4526 (178 1/4)	4532 (178 1/2)	4536 (178 5/8)	4539 (178 3/4)	4540 (178 7/8)	4541 (178 7/8)	4541 (178 7/8)	4539 (178 3/4)	4536 (178 5/8)
B Ylens	1072 (42 1/4)	950 (37 1/2)	871 (34 3/8)	792 (31 1/4)	713 (28 1/8)	634 (25)	555 (21 7/8)	476 (18 3/4)	397 (15 5/8)	317 (12 1/2)	238 (9 3/8)	159 (6 3/8)	79 (3 1/8)	0 (0)	–79 (–3 1/8)	–159 (–6 3/8)
D TD	4571 (180)	4567 (179 7/8)	4565 (179 3/4)	4562 (179 5/8)	4559 (179 5/8)	4556 (179 1/2)	4554 (179 3/8)	4551 (179 1/4)	4549 (179 1/8)	4547 (179 1/8)	4545 (179)	4543 (178 7/8)	4542 (178 7/8)	4541 (178 7/8)	4540 (178 3/4)	4539 (178 3/4)
C dVoff	0 (0)	0 (0)	0 (0)	0 (0)	5 (7/32)	12 (1/2)	18 (23/32)	24 (31/32)	30 (1 3/16)	36 (1 7/16)	43 (1 3/4)	49 (1 15/16)	55 (2 1/4)	62 (2 1/2)	68 (2 3/4)	74 (3)
Spacer																
Red–L	–8	–6.5	–5.5	–3.5	–1.5	1	3	4	5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Red–C	12.5	13	14	15.5	17.5	–16	–14	–12.5	–11.5	–10.5	–10	–9.5	–9	–8.5	–8.5	–8
Green–L	–10	–9.5	–9.5	–9.5	–9	–9	–8.5	–8.5	–8.5	–8	–8	–7.5	–7.5	–7.5	–7	–7
Green–C	10	9.5	9.5	9.5	9	9	8.5	8.5	8.5	8	8	7.5	7.5	7.5	7	7
Blue–L	8	6.5	5.5	3.5	1.5	–1	–3	–4	–5	–5.5	–5.5	–5.5	–5.5	–5.5	–5.5	–5.5
Blue–C	–12.5	–13	–14	–15.5	–17.5	16	14	12.5	11.5	10.5	10	9.5	9	8.5	8.5	8

When using the 170 inch screen

Unit: mm (inches)

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	–1°	–2°
E Xlens	4717 (185 3/4)	4742 (186 3/4)	4756 (187 3/8)	4769 (187 7/8)	4780 (188 1/4)	4790 (188 5/8)	4798 (189)	4805 (189 1/4)	4810 (189 3/8)	4815 (189 5/8)	4818 (189 3/4)	4820 (189 3/4)	4820 (189 7/8)	4820 (189 3/4)	4818 (189 3/4)	4815 (189 5/8)
B Ylens	1139 (44 7/8)	1008 (39 3/4)	925 (36 1/2)	841 (33 1/8)	757 (29 7/8)	673 (26 1/2)	589 (23 1/4)	505 (20)	421 (16 5/8)	337 (13 3/8)	253 (10)	168 (6 5/8)	84 (3 3/8)	0 (0)	–84 (–3 3/8)	–168 (–6 5/8)
D TD	4852 (191 1/8)	4848 (190 7/8)	4845 (190 7/8)	4843 (190 3/4)	4840 (190 5/8)	4837 (190 1/2)	4834 (190 3/8)	4831 (190 1/4)	4829 (190 1/8)	4826 (190 1/8)	4824 (190)	4823 (189 7/8)	4821 (189 7/8)	4820 (189 3/4)	4819 (189 3/4)	4818 (189 3/4)
C dVoff	0 (0)	0 (0)	0 (0)	0 (0)	6 (1/4)	12 (1/2)	19 (3/4)	25 (1)	32 (1 5/16)	39 (1 9/16)	45 (1 13/16)	52 (2 1/8)	59 (2 3/8)	65 (2 5/8)	72 (2 7/8)	79 (3 1/8)
Spacer																
Red–L	–7.5	–6	–4.5	–2.5	0	2.5	4	5	5.5	5.5	6	6	6	6	6	5.5
Red–C	12.5	13.5	14.5	16.5	–17	–14.5	–13	–12	–11	–10.5	–9.5	–9.5	–9	–8.5	–8	–8
Green–L	–10	–9.5	–9.5	–9	–9	–9	–8.5	–8.5	–8	–8	–8	–7.5	–7.5	–7.5	–7	–7
Green–C	10	9.5	9.5	9	9	9	8.5	8.5	8	8	8	7.5	7.5	7.5	7	7
Blue–L	7.5	6	4.5	2.5	0	–2.5	–4	–5	–5.5	–5.5	–6	–6	–6	–6	–6	–5.5
Blue–C	–12.5	–13.5	–14.5	–16.5	17	14.5	13	12	11	10.5	9.5	9.5	9	8.5	8	8

When using the 180 inch screen

Unit: mm (inches)

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	–1°	–2°
E Xlens	4993 (196 5/8)	5020 (197 3/4)	5035 (198 1/4)	5049 (198 7/8)	5060 (199 1/4)	5070 (199 5/8)	5079 (200)	5086 (200 1/4)	5092 (200 1/2)	5097 (200 3/4)	5100 (200 7/8)	5102 (200 7/8)	5103 (201)	5102 (200 7/8)	5100 (200 7/8)	5097 (200 7/8)
B Ylens	1205 (47 1/2)	1067 (42 1/8)	979 (38 5/8)	890 (35 1/8)	802 (31 5/8)	713 (28 1/8)	624 (24 5/8)	535 (21 1/8)	446 (17 5/8)	356 (14 1/8)	267 (10 5/8)	178 (7 1/8)	89 (3 5/8)	0 (0)	–89 (–3 5/8)	–178 (–7 1/8)
D TD	5137 (202 1/4)	5132 (202 1/8)	5130 (202)	5127 (201 7/8)	5123 (201 3/4)	5120 (201 5/8)	5117 (201 1/2)	5114 (201 3/8)	5112 (201 1/4)	5109 (201 1/4)	5107 (201 1/8)	5105 (201)	5104 (201)	5102 (200 7/8)	5101 (200 7/8)	5100 (200 7/8)
C dVoff	0 (0)	0 (0)	0 (0)	0 (0)	6 (1/4)	13 (17/32)	20 (13/16)	27 (1 1/8)	34 (1 3/8)	41 (1 5/8)	48 (1 15/16)	55 (2 1/4)	62 (2 1/2)	69 (2 3/4)	76 (3)	84 (3 3/8)
Spacer																
Red–L	–7.5	–5.5	–4	–1.5	1.5	3.5	4.5	5.5	5.5	6	6	6	6	6	6	6
Red–C	12.5	13.5	15	17.5	–16	–13.5	–12	–11	–10.5	–10	–9.5	–9	–9	–8.5	–8	–8
Green–L	–10	–9.5	–9.5	–9	–9	–8.5	–8.5	–8.5	–8	–8	–8	–7.5	–7.5	–7.5	–7	–7
Green–C	10	9.5	9.5	9	9	8.5	8.5	8.5	8	8	8	7.5	7.5	7.5	7	7
Blue–L	7.5	5.5	4	1.5	–1.5	–3.5	–4.5	–5.5	–5.5	–6	–6	–6	–6	–6	–6	–6
Blue–C	–12.5	–13.5	–15	–17.5	16	13.5	12	11	10.5	10	9.5	9	9	8.5	8	8

When using the 190 inch screen

Unit: mm (inches)

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	–1°	–2°
E Xlens	5268 (207 1/2)	5297 (208 5/8)	5313 (209 1/4)	5327 (209 3/4)	5339 (210 1/4)	5349 (210 5/8)	5359 (211)	5366 (211 3/8)	5372 (211 5/8)	5377 (211 3/4)	5381 (211 7/8)	5383 (212)	5384 (212)	5383 (212)	5381 (211 7/8)	5378 (211 3/4)
B Ylens	1272 (50 1/8)	1126 (44 3/8)	1033 (40 3/4)	939 (37)	846 (33 3/8)	752 (29 5/8)	658 (26)	564 (22 1/4)	470 (18 5/8)	376 (14 7/8)	282 (11 1/8)	188 (7 1/2)	94 (3 3/4)	0 (0)	–94 (–3 3/4)	–188 (–7 1/2)
D TD	5419 (213 3/8)	5415 (213 1/4)	5412 (213 1/8)	5409 (213)	5406 (212 7/8)	5402 (212 3/4)	5399 (212 5/8)	5396 (212 1/2)	5393 (212 3/8)	5390 (212 1/4)	5388 (212 1/4)	5386 (212 1/8)	5385 (212)	5383 (212)	5382 (212)	5381 (211 7/8)
C dVoff	0 (0)	0 (0)	0 (0)	0 (0)	6 (1/4)	14 (9/16)	21 (27/32)	28 (1 1/8)	36 (1 7/16)	43 (1 3/4)	51 (2 1/8)	58 (2 3/8)	65 (2 5/8)	73 (2 7/8)	81 (3 1/4)	88 (3 1/2)
Spacer																
Red–L	–7	–5	–3	0	2.5	4.5	5	5.5	6	6	6	6	6	6	6	6
Red–C	12.5	14	15.5	–17.5	–14.5	–12.5	–11.5	–10.5	–10	–9.5	–9.5	–9	–8.5	–8.5	–8	–8
Green–L	–9.5	–9.5	–9	–9	–9	–8.5	–8.5	–8.5	–8	–8	–8	–7.5	–7.5	–7.5	–7	–7
Green–C	9.5	9.5	9	9	9	8.5	8.5	8.5	8	8	8	7.5	7.5	7.5	7	7
Blue–L	7	5	3	0	–2.5	–4.5	–5	–5.5	–6	–6	–6	–6	–6	–6	–6	–6
Blue–C	–12.5	–14	–15.5	17.5	14.5	12.5	11.5	10.5	10	9.5	9.5	9	8.5	8.5	8	8

List of the Projection Distance by Angle of Optical Axis

When using the 200 inch screen

Unit: mm (inches)

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	–1°	–2°
E Xlens	5543 (218 1/4)	5573 (219 1/2)	5590 (220 1/8)	5605 (220 3/4)	5618 (221 1/4)	5629 (221 5/8)	5638 (222)	5646 (222 3/8)	5653 (222 5/8)	5658 (222 7/8)	5662 (223)	5664 (223)	5665 (223 1/8)	5664 (223)	5662 (223)	5658 (222 7/8)
B Ylens	1338 (52 3/4)	1185 (46 3/4)	1087 (42 7/8)	988 (39)	890 (35 1/8)	791 (31 1/4)	692 (27 1/4)	593 (23 3/8)	495 (19 1/2)	396 (15 5/8)	297 (11 3/4)	198 (7 7/8)	99 (4)	0 (0)	–99 (–4)	–198 (–7 7/8)
D TD	5702 (224 1/2)	5697 (224 3/8)	5694 (224 1/4)	5691 (224 1/8)	5688 (224)	5684 (223 7/8)	5680 (223 3/4)	5677 (223 5/8)	5674 (223 1/2)	5672 (223 3/8)	5669 (223 1/4)	5667 (223 1/8)	5665 (223 1/8)	5664 (223)	5663 (223)	5662 (223)
C dVoff	0 (0)	0 (0)	0 (0)	0 (0)	7 (9/32)	14 (9/16)	22 (7/8)	30 (1 3/16)	38 (1 1/2)	45 (1 13/16)	53 (2 1/8)	61 (2 1/2)	69 (2 3/4)	77 (3 1/8)	85 (3 3/8)	93 (3 3/4)
Spacer																
Red–L	–7	–4.5	–2	1.5	4	5	5.5	6	6.5	6.5	6.5	6.5	6.5	6.5	6	6
Red–C	12.5	14	17	–16	–13.5	–12	–11	–10.5	–10	–9.5	–9	–9	–8.5	–8.5	–8	–8
Green–L	–9.5	–9.5	–9	–9	–8.5	–8.5	–8.5	–8.5	–8	–8	–8	–7.5	–7.5	–7.5	–7	–7
Green–C	9.5	9.5	9	9	8.5	8.5	8.5	8.5	8	8	8	7.5	7.5	7.5	7	7
Blue–L	7	4.5	2	–1.5	–4	–5	–5.5	–6	–6.5	–6.5	–6.5	–6.5	–6.5	–6.5	–6	–6
Blue–C	–12.5	–14	–17	16	13	12	11	10.5	10	9.5	9	9	8.5	8.5	8	8

When using the 210 inch screen

Unit: mm (inches)

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	–1°	–2°
E Xlens	5816 (229)	5847 (230 1/4)	5865 (231)	5881 (231 5/8)	5894 (232 1/8)	5906 (232 5/8)	5916 (233)	5924 (233 1/4)	5931 (233 5/8)	5937 (233 3/4)	5941 (234)	5943 (234)	5944 (234 1/8)	5943 (234)	5941 (234)	5937 (233 3/4)
B Ylens	1404 (55 3/8)	1243 (49)	1140 (45)	1037 (40 7/8)	934 (36 7/8)	830 (32 3/4)	726 (28 5/8)	623 (24 5/8)	519 (20 1/2)	415 (16 3/8)	311 (12 1/4)	208 (8 1/4)	104 (4 1/8)	0 (0)	–104 (–4 1/8)	–208 (–8 1/4)
D TD	5983 (235 5/8)	5978 (235 3/8)	5975 (235 1/4)	5972 (235 1/8)	5968 (235)	5964 (234 7/8)	5960 (234 3/4)	5957 (234 5/8)	5954 (234 1/2)	5951 (234 3/8)	5949 (234 1/4)	5947 (234 1/8)	5945 (234 1/8)	5943 (234)	5942 (234)	5941 (234)
C dVoff	0 (0)	0 (0)	0 (0)	0 (0)	7 (9/32)	15 (19/32)	23 (29/32)	31 (1 1/4)	39 (1 9/16)	47 (1 7/8)	56 (2 1/4)	64 (2 5/8)	72 (2 7/8)	81 (3 1/4)	89 (3 5/8)	97 (3 7/8)
Spacer																
Red–L	–6.5	–3.5	–0.5	3	4.5	5.5	6	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6
Red–C	12.5	15	–18	–14.5	–12.5	–11.5	–10.5	–10	–9.5	–9.5	–9	–8.5	–8.5	–8	–8	–7.5
Green–L	–9.5	–9	–9	–9	–8.5	–8.5	–8.5	–8	–8	–8	–8	–7.5	–7.5	–7.5	–7	–7
Green–C	9.5	9	9	9	8.5	8.5	8.5	8	8	8	8	7.5	7.5	7.5	7	7
Blue–L	6.5	3.5	0.5	–3	–4.5	–5.5	–6	–6.5	–6.5	–6.5	–6.5	–6.5	–6.5	–6.5	–6.5	–6
Blue–C	–12.5	–15	18	14.5	12.5	11.5	10.5	10	9.5	9.5	9	8.5	8.5	8	8	7.5

List of the Projection Distance by Angle of Optical Axis

When using the 220 inch screen

Unit: mm (inches)

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	−1°	−2°
E Xlens	6093 (239 7/8)	6126 (241 1/4)	6144 (242)	6161 (242 5/8)	6175 (243 1/8)	6187 (243 5/8)	6197 (244)	6206 (244 3/8)	6213 (244 5/8)	6219 (244 7/8)	6223 (245)	6226 (245 1/8)	6226 (245 1/8)	6226 (245 1/8)	6223 (245 1/8)	6219 (244 7/8)
B Ylens	1471 (58)	1302 (51 3/8)	1194 (47 1/8)	1086 (42 7/8)	978 (38 5/8)	870 (34 3/8)	761 (30)	652 (25 3/4)	544 (21 1/2)	435 (17 1/4)	326 (12 7/8)	217 (8 5/8)	109 (4 3/8)	0 (0)	−109 (−4 3/8)	−217 (−8 5/8)
D TD	6268 (246 7/8)	6262 (246 5/8)	6259 (246 1/2)	6256 (246 3/8)	6252 (246 1/4)	6248 (246)	6244 (245 7/8)	6240 (245 3/4)	6237 (245 5/8)	6234 (245 1/2)	6232 (245 3/8)	6229 (245 1/4)	6227 (245 1/4)	6226 (245 1/8)	6224 (245 1/8)	6223 (245)
C dVoff	0 (0)	0 (0)	0 (0)	0 (0)	7 (9/32)	16 (21/32)	25 (1)	33 (1 5/16)	41 (1 5/8)	50 (2)	59 (2 3/8)	67 (2 3/4)	76 (3)	84 (3 3/8)	93 (3 3/4)	102 (4 1/8)
Spacer																
Red–L	−6	−2.5	1.5	4	5.5	6	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	−7.5
Red–C	13	16	−16	−13.5	−12	−11	−10.5	−10	−9.5	−9	−9	−8.5	−8.5	−8	−8	6.5
Green–L	−9.5	−9	−9	−9	−8.5	−8.5	−8.5	−8	−8	−8	−8	−7.5	−7.5	−7.5	−7	−7
Green–C	9.5	9	9	9	8.5	8.5	8.5	8	8	8	8	7.5	7.5	7.5	7	7
Blue–L	6	2.5	−1.5	−4	−5.5	−6	−6.5	−6.5	−6.5	−6.5	−6.5	−6.5	−6.5	−6.5	−6.5	7.5
Blue–C	−13	−16	16	13.5	12	11	10.5	10	9.5	9	9	8.5	8.5	8	8	−6.5

When using the 230 inch screen

Unit: mm (inches)

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	−1°	−2°
E Xlens	6345 (249 7/8)	6380 (251 1/4)	6399 (252)	6416 (252 5/8)	6431 (253 1/4)	6443 (253 3/4)	6454 (254 1/8)	6463 (254 1/2)	6471 (254 7/8)	6477 (255)	6481 (255 1/4)	6484 (255 3/8)	6485 (255 3/8)	6484 (255 3/8)	6481 (255 1/4)	6477 (255 1/8)
B Ylens	1533 (60 3/8)	1356 (53 1/2)	1244 (49)	1131 (44 5/8)	1019 (40 1/8)	906 (35 3/4)	793 (31 1/4)	679 (26 3/4)	566 (22 3/8)	453 (17 7/8)	340 (13 1/2)	226 (9)	113 (4 1/2)	0 (0)	−113 (−4 1/2)	−226 (−9)
D TD	6528 (257)	6522 (256 7/8)	6519 (256 3/4)	6515 (256 5/8)	6511 (256 3/8)	6507 (256 1/4)	6503 (256 1/8)	6499 (255 7/8)	6496 (255 3/4)	6493 (255 5/8)	6490 (255 5/8)	6488 (255 1/2)	6486 (255 3/8)	6484 (255 3/8)	6482 (255 1/4)	6481 (255 1/4)
C dVoff	0 (0)	0 (0)	0 (0)	0 (0)	7 (9/32)	16 (21/32)	25 (1)	34 (1 3/8)	43 (1 3/4)	52 (2 1/8)	61 (2 1/2)	70 (2 7/8)	79 (3 1/8)	88 (3 1/2)	97 (3 7/8)	106 (4 1/4)
Spacer																
Red–L	−5.5	−1	2.5	4.5	5.5	6	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Red–C	13.5	17.5	−15	−12.5	−11.5	−10.5	−10	−9.5	−9.5	−9	−9	−8.5	−8.5	−8	−8	−7.5
Green–L	−9.5	−9	−9	−8.5	−8.5	−8.5	−8.5	−8	−8	−8	−7.5	−7.5	−7.5	−7.5	−7	−7
Green–C	9.5	9	9	8.5	8.5	8.5	8.5	8	8	8	7.5	7.5	7.5	7.5	7	7
Blue–L	5.5	1	−2.5	−4.5	−5.5	−6	−6.5	−6.5	−6.5	−6.5	−6.5	−6.5	−6.5	−6.5	−6.5	−6.5
Blue–C	−13.5	−17.5	15	12.5	11.5	10.5	10	9.5	9.5	9	9	8.5	8.5	8	8	7.5

When using the 240 inch screen

Unit: mm (inches)

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	−1°	−2°
E Xlens	6600 (259 7/8)	6635 (261 1/4)	6655 (262 1/8)	6673 (262 3/4)	6689 (263 3/8)	6702 (263 7/8)	6713 (264 3/8)	6723 (264 3/4)	6730 (265)	6737 (265 1/4)	6741 (265 1/2)	6744 (265 1/2)	6744 (265 5/8)	6744 (265 1/2)	6741 (265 1/2)	6737 (265 1/4)
B Ylens	1594 (62 7/8)	1410 (55 5/8)	1294 (51)	1177 (46 3/8)	1059 (41 3/4)	942 (37 1/8)	824 (32 1/2)	707 (27 7/8)	589 (23 1/4)	471 (18 5/8)	353 (14)	236 (9 3/8)	118 (4 3/4)	0 (0)	−118 (−4 3/4)	−236 (−9 3/8)
D TD	6789 (267 3/8)	6784 (267 1/8)	6780 (267)	6776 (266 7/8)	6772 (266 5/8)	6768 (266 1/2)	6763 (266 3/8)	6760 (266 1/4)	6756 (266)	6753 (265 7/8)	6750 (265 7/8)	6748 (265 3/4)	6746 (265 5/8)	6744 (265 1/2)	6742 (265 1/2)	6741 (265 1/2)
C dVoff	0 (0)	0 (0)	0 (0)	0 (0)	7 (9/32)	17 (11/16)	26 (1 1/16)	35 (1 7/16)	44 (1 3/4)	54 (2 1/4)	63 (2 1/2)	73 (2 7/8)	82 (3 1/4)	92 (3 5/8)	101 (4)	111 (4 3/8)
Spacer																
Red–L	−4.5	0.5	3.5	5	6	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Red–C	14	−17	−14	−12	−11	−10.5	−10	−9.5	−9	−9	−8.5	−8.5	−8.5	−8	−8	−7.5
Green–L	−9	−9	−9	−8.5	−8.5	−8.5	−8.5	−8	−8	−8	−7.5	−7.5	−7.5	−7.5	−7	−7
Green–C	9	9	9	8.5	8.5	8.5	8.5	8	8	8	7.5	7.5	7.5	7.5	7	7
Blue–L	4.5	−0.5	−3.5	−5	−6	−6.5	−6.5	−6.5	−6.5	−6.5	−6.5	−6.5	−6.5	−6.5	−6.5	−6.5
Blue–C	−14	17	14	12	11	10.5	10	9.5	9	9	8.5	8.5	8.5	8	8	7.5

When using the 250 inch screen

Unit: mm (inches)

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	−1°	−2°
E Xlens	6868 (270 3/8)	6905 (271 7/8)	6926 (272 3/4)	6944 (273 1/2)	6960 (274 1/8)	6974 (274 5/8)	6986 (275 1/8)	6996 (275 1/2)	7004 (275 3/4)	7010 (276)	7015 (276 1/4)	7017 (276 3/8)	7018 (276 3/8)	7018 (276 3/8)	7015 (276 1/4)	7010 (276)
B Ylens	1659 (65 3/8)	1468 (57 7/8)	1346 (53)	1225 (48 1/4)	1102 (43 1/2)	980 (38 5/8)	858 (33 7/8)	735 (29)	613 (24 1/4)	490 (19 3/8)	368 (14 1/2)	245 (9 3/4)	123 (4 7/8)	0 (0)	−122 (−4 7/8)	−245 (−9 3/4)
D TD	7065 (278 1/4)	7059 (278)	7055 (277 7/8)	7052 (277 5/8)	7047 (277 1/2)	7042 (277 3/8)	7038 (277 1/8)	7034 (277)	7031 (276 7/8)	7027 (276 3/4)	7024 (276 5/8)	7022 (276 1/2)	7019 (276 3/8)	7018 (276 3/8)	7016 (276 1/4)	7015 (276 1/4)
C dVoff	0 (0)	0 (0)	0 (0)	0 (0)	7 (9/32)	17 (11/16)	27 (1 1/8)	37 (1 1/2)	46 (1 13/16)	56 (2 1/4)	66 (2 5/8)	76 (3)	86 (3 1/2)	96 (3 7/8)	106 (4 1/4)	116 (4 5/8)
Spacer																
Red–L	−3.5	2	4.5	5.5	6	6.5	6.5	7	7	7	7	6.5	6.5	6.5	6.5	6.5
Red–C	15	−15.5	−13	−11.5	−10.5	−10	−9.5	−9.5	−9	−9	−8.5	−8.5	−8	−8	−8	−7.5
Green–L	−9	−9	−9	−8.5	−8.5	−8.5	−8	−8	−8	−8	−7.5	−7.5	−7.5	−7.5	−7	−7
Green–C	9	9	9	8.5	8.5	8.5	8	8	8	8	7.5	7.5	7.5	7.5	7	7
Blue–L	3.5	−2	−4.5	−5.5	−6	−6.5	−6.5	−7	−7	−7	−7	−6.5	−6.5	−6.5	−6.5	−6.5
Blue–C	−15	15.5	13	11.5	10.5	10	9.5	9.5	9	9	8.5	8.5	8	8	8	7.5

When using the 260 inch screen

Unit: mm (inches)

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	–1°	–2°
🄴Xlens	7158 (281 7/8)	7197 (283 3/8)	7218 (284 1/4)	7238 (285)	7254 (285 5/8)	7268 (286 1/4)	7281 (286 3/4)	7291 (287 1/8)	7300 (287 1/2)	7306 (287 3/4)	7311 (287 7/8)	7314 (288)	7315 (288)	7314 (288)	7311 (287 7/8)	7307 (287 3/4)
🄱Ylens	1729 (68 1/8)	1530 (60 1/4)	1403 (55 1/4)	1276 (50 1/4)	1149 (45 1/4)	1022 (40 1/4)	894 (35 1/4)	766 (30 1/4)	639 (25 1/4)	511 (20 1/8)	383 (15 1/8)	255 (10 1/8)	128 (5 1/8)	0 (0)	–128 (–5 1/8)	–255 (–10 1/8)
🄳TD	7364 (290)	7357 (289 3/4)	7353 (289 5/8)	7350 (289 3/8)	7345 (289 1/4)	7340 (289)	7335 (288 7/8)	7331 (288 3/4)	7328 (288 1/2)	7324 (288 3/8)	7321 (288 1/4)	7318 (288 1/4)	7316 (288 1/8)	7314 (288)	7312 (288)	7311 (287 7/8)
🄲dVoff	0 (0)	0 (0)	0 (0)	0 (0)	8 (11/32)	18 (23/32)	29 (1 3/16)	39 (1 9/16)	48 (1 15/16)	59 (2 3/8)	69 (2 3/4)	79 (3 1/8)	90 (3 5/8)	99 (4)	110 (4 3/8)	120 (4 3/4)
Spacer																
Red–L	–2	3.5	5	6	6.5	6.5	7	7	7	7	7	6.5	6.5	6.5	6.5	–7.5
Red–C	16.5	–14	–12	–11	–10.5	–10	–9.5	–9.5	–9	–9	–8.5	–8.5	–8	–8	–8	6.5
Green–L	–9	–9	–8.5	–8.5	–8.5	–8.5	–8	–8	–8	–8	–7.5	–7.5	–7.5	–7.5	–7	–7
Green–C	9	9	8.5	8.5	8.5	8.5	8	8	8	8	7.5	7.5	7.5	7.5	7	7
Blue–L	2	–3.5	–5	–6	–6.5	–6.5	–7	–7	–7	–7	–7	–6.5	–6.5	–6.5	–6.5	7.5
Blue–C	–16.5	14	12	11	10.5	10	9.5	9.5	9	9	8.5	8.5	8	8	8	–6.5

When using the 270 inch screen

Unit: mm (inches)

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	–1°	–2°
🄴Xlens	7445 (293 1/8)	7485 (294 3/4)	7508 (295 5/8)	7528 (296 3/8)	7545 (297 1/8)	7560 (297 3/4)	7572 (298 1/4)	7583 (298 5/8)	7592 (299)	7599 (299 1/4)	7604 (299 3/8)	7607 (299 1/2)	7608 (299 5/8)	7607 (299 1/2)	7604 (299 3/8)	7599 (299 1/4)
🄱Ylens	1798 (70 7/8)	1591 (62 3/4)	1459 (57 1/2)	1327 (52 1/4)	1195 (47 1/8)	1062 (41 7/8)	930 (36 5/8)	797 (31 1/2)	664 (26 1/4)	531 (21)	399 (15 3/4)	266 (10 1/2)	133 (5 1/4)	0 (0)	–133 (–5 1/4)	–266 (–10 1/2)
🄳TD	7659 (301 5/8)	7652 (301 3/8)	7648 (301 1/8)	7644 (301)	7639 (300 3/4)	7634 (300 5/8)	7629 (300 3/8)	7625 (300 1/4)	7621 (300 1/8)	7618 (300)	7614 (299 7/8)	7612 (299 3/4)	7609 (299 5/8)	7607 (299 1/2)	7605 (299 1/2)	7604 (299 3/8)
🄲dVoff	0 (0)	0 (0)	0 (0)	0 (0)	9 (3/8)	19 (3/4)	30 (1 3/16)	40 (1 5/8)	51 (2 1/8)	61 (2 1/2)	72 (2 7/8)	82 (3 1/4)	93 (3 3/4)	104 (4 1/8)	114 (4 1/2)	125 (5)
Spacer																
Red–L	–0.5	4.5	5.5	6	6.5	6.5	7	7	7	7	7	7	6.5	6.5	6.5	6.5
Red–C	–18	–13	–11.5	–11	–10	–10	–9.5	–9	–9	–8.5	–8.5	–8.5	–8	–8	–8	–7.5
Green–L	–9	–9	–8.5	–8.5	–8.5	–8.5	–8	–8	–8	–8	–7.5	–7.5	–7.5	–7.5	–7	–7
Green–C	9	9	8.5	8.5	8.5	8.5	8	8	8	8	7.5	7.5	7.5	7.5	7	7
Blue–L	0.5	–4.5	–5.5	–6	–6.5	–6.5	–7	–7	–7	–7	–7	–7	–6.5	–6.5	–6.5	–6.5
Blue–C	18	13	11.5	11	10	10	9.5	9	9	8.5	8.5	8.5	8	8	8	7.5

List of the Projection Distance by Angle of Optical Axis

When using the 280 inch screen

Unit: mm (inches)

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	–1°	–2°
🄴Xlens	7726 (304 1/4)	7768 (305 7/8)	7792 (306 7/8)	7813 (307 5/8)	7830 (308 1/4)	7846 (309)	7859 (309 1/2)	7870 (309 7/8)	7879 (310 1/4)	7887 (310 1/2)	7892 (310 3/4)	7895 (310 7/8)	7896 (310 7/8)	7895 (310 7/8)	7892 (310 3/4)	7887 (310 5/8)
🄱Ylens	1867 (73 1/2)	1651 (65 1/8)	1515 (59 3/4)	1378 (54 3/8)	1240 (48 7/8)	1103 (43 1/2)	965 (38)	827 (32 5/8)	689 (27 1/4)	552 (21 3/4)	414 (16 3/8)	276 (10 7/8)	138 (5 1/2)	0 (0)	–138 (–5 1/2)	–276 (–10 7/8)
🄳TD	7948 (313)	7942 (312 3/4)	7938 (312 1/2)	7933 (312 3/8)	7928 (312 1/8)	7923 (312)	7918 (311 3/4)	7914 (311 5/8)	7910 (311 1/2)	7906 (311 3/8)	7903 (311 1/8)	7900 (311 1/8)	7897 (311)	7895 (310 7/8)	7893 (310 3/4)	7892 (310 3/4)
🄲dVoff	0 (0)	0 (0)	0 (0)	0 (0)	9 (3/8)	20 (13/16)	31 (1 1/4)	42 (1 11/16)	53 (2 1/8)	64 (2 5/8)	75 (3)	86 (3 1/2)	97 (3 7/8)	108 (4 3/8)	119 (4 3/4)	130 (5 1/8)
Spacer																
Red–L	1.5	5	6	6.5	6.5	7	7	7	7	7	7	7	6.5	6.5	6.5	6.5
Red–C	–16	–12.5	–11	–10.5	–10	–9.5	–9.5	–9	–9	–8.5	–8.5	–8.5	–8	–8	–8	–7.5
Green–L	–9	–8.5	–8.5	–8.5	–8.5	–8.5	–8	–8	–8	–8	–7.5	–7.5	–7.5	–7.5	–7	–7
Green–C	9	8.5	8.5	8.5	8.5	8.5	8	8	8	8	7.5	7.5	7.5	7.5	7	7
Blue–L	–1.5	–5	–6	–6.5	–6.5	–7	–7	–7	–7	–7	–7	–7	–6.5	–6.5	–6.5	–6.5
Blue–C	16	12.5	11	10.5	10	9.5	9.5	9	9	8.5	8.5	8.5	8	8	8	7.5

When using the 290 inch screen

Unit: mm (inches)

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	–1°	–2°
🄴Xlens	8011 (315 1/2)	8055 (317 1/8)	8079 (318 1/8)	8101 (319)	8119 (319 3/4)	8135 (320 3/8)	8149 (320 7/8)	8161 (321 3/8)	8170 (321 3/4)	8178 (322)	8183 (322 1/4)	8186 (322 3/8)	8187 (322 3/8)	8186 (322 3/8)	8183 (322 1/4)	8178 (322)
🄱Ylens	1935 (76 1/4)	1712 (67 1/2)	1570 (61 7/8)	1428 (56 1/4)	1286 (50 3/4)	1143 (45)	1001 (39 1/2)	858 (33 7/8)	715 (28 1/4)	572 (22 5/8)	429 (17)	286 (11 3/8)	143 (5 3/4)	0 (0)	–143 (–5 3/4)	–286 (–11 3/8)
🄳TD	8242 (324 1/2)	8235 (324 1/4)	8230 (324 1/8)	8226 (323 7/8)	8220 (323 3/4)	8215 (323 1/2)	8210 (323 1/4)	8206 (323 1/8)	8201 (323)	8198 (322 3/4)	8194 (322 5/8)	8191 (322 1/2)	8188 (322 1/2)	8186 (322 3/8)	8184 (322 1/4)	8183 (322 1/4)
🄲dVoff	0 (0)	0 (0)	0 (0)	0 (0)	10 (13/32)	21 (27/32)	32 (1 5/16)	44 (1 3/4)	55 (2 1/4)	66 (2 5/8)	78 (3 1/8)	89 (3 5/8)	100 (4)	112 (4 1/2)	123 (4 7/8)	135 (5 3/8)
Spacer																
Red–L	3	5.5	6	6.5	7	7	7	7	7	7	7	7	7	6.5	6.5	6.5
Red–C	–14.5	–11.5	–11	–10.5	–10	–9.5	–9.5	–9	–9	–8.5	–8.5	–8.5	–8	–8	–8	–7.5
Green–L	–9	–8.5	–8.5	–8.5	–8.5	–8	–8	–8	–8	–8	–7.5	–7.5	–7.5	–7.5	–7	–7
Green–C	9	8.5	8.5	8.5	8.5	8	8	8	8	8	7.5	7.5	7.5	7.5	7	7
Blue–L	–3	–5.5	–6	–6.5	–7	–7	–7	–7	–7	–7	–7	–7	–7	–6.5	–6.5	–6.5
Blue–C	14.5	11.5	11	10.5	10	9.5	9.5	9	9	8.5	8.5	8.5	8	8	8	7.5

When using the 300 inch screen

Unit: mm (inches)

a TA (deg)	13.6°	12°	11°	10°	9°	8°	7°	6°	5°	4°	3°	2°	1°	0°	–1°	–2°
E Xlens	8295 (326 5/8)	8340 (328 3/8)	8365 (329 3/8)	8388 (330 1/4)	8406 (331)	8423 (331 5/8)	8437 (332 1/4)	8449 (332 3/4)	8459 (333 1/8)	8467 (333 3/8)	8472 (333 5/8)	8476 (333 3/4)	8477 (333 3/4)	8476 (333 3/4)	8473 (333 5/8)	8467 (333 3/8)
B Ylens	2004 (79)	1773 (69 7/8)	1626 (64 1/8)	1479 (58 1/4)	1331 (52 1/2)	1184 (46 5/8)	1036 (40 7/8)	888 (35)	740 (29 1/4)	592 (23 3/8)	444 (17 1/2)	296 (11 3/4)	148 (5 7/8)	0 (0)	–148 (–5 7/8)	–296 (–11 3/4)
D TD	8533 (336)	8526 (335 3/4)	8522 (335 1/2)	8517 (335 3/8)	8511 (335 1/8)	8506 (334 7/8)	8501 (334 3/4)	8496 (334 1/2)	8491 (334 3/8)	8488 (334 1/4)	8484 (334 1/8)	8481 (334)	8478 (330 7/8)	8476 (333 3/4)	8474 (330 5/8)	8472 (333 5/8)
C dVoff	0 (0)	0 (0)	0 (0)	0 (0)	11 (7/16)	22 (7/8)	34 (1 3/8)	45 (1 13/16)	57 (2 1/4)	69 (2 3/4)	80 (3 1/4)	92 (3 5/8)	104 (4 1/8)	116 (4 5/8)	128 (5 1/8)	139 (5 1/2)
Spacer																
Red–L	4	6	6.5	6.5	7	7	7	7	7	7	7	7	7	6.5	6.5	6.5
Red–C	–13.5	–11.5	–10.5	–10	–9.5	–9.5	–9	–9	–9	–8.5	–8.5	–8	–8	–8	–8	–7.5
Green–L	–9	–8.5	–8.5	–8.5	–8.5	–8	–8	–8	–8	–8	–7.5	–7.5	–7.5	–7.5	–7	–7
Green–C	9	8.5	8.5	8.5	8.5	8	8	8	8	8	7.5	7.5	7.5	7.5	7	7
Blue–L	–4	–6	–6.5	–6.5	–7	–7	–7	–7	–7	–7	–7	–7	–7	–6.5	–6.5	–6.5
Blue–C	13.5	11.5	10.5	10	9.5	9.5	9	9	9	8.5	8.5	8	8	8	8	7.5

Index

A
Adjusting
  AQP/DQP 53, 55 (E)
  black level 85 (E)
  blanking 59 (E)
  blue centering 75 (E)
  blue focus 55 (E)
  blue registration 75 (E)
  CRT conversion angle 20 (E)
  each input signal fine 80 (E)
  green centering 61 (E)
  green focus 49 (E)
  green KEY and PIN 66 (E)
  green registration 61 (E)
  green SIZE and LIN 62 (E)
  green SKEW and BOW 64 (E)
  magnetic focus 51 (E)
  magnetic focus fine 80 to 82 (E)
  picture size 81 (E)
  picture quality 92 (E)
  red centering 68 (E)
  red focus 55 (E)
  red KEY and PIN 72 (E)
  red registration 68 (E)
  red SIZE and LIN 68 (E)
  red SKEW and BOW 70 (E)
  red ZONE 74 (E)
  registration fine 80 (E), 82 (E)
  RGB input signal 82 (E)
  RGB SHIFT 84 (E)
  RGB SIZE 83 (E)
  white balance 85 (E)
  white level 86 (E)
AQP 53 (E)

B
BAUD RATE PRESET (PAGE5) 44 (E)
Blanking 60 (E)

C
Carrying the projector 8 (E)
Changing
  initialization period 93 (E)
  picture luminance (clamp setting) 87 (E)
  polarity 22 (E)
  ring spacers 18 (E)
Clamp setting 87 (E)
COLOR TEMPERATURE: (PAGE3) 42 (E)
Connecting
  remote control to the projector 38 (E)
  to external equipment directly 28 (E)
  using the optional board or switcher 31 (E) to 33 (E)
  when projecting the high resolution pictures 34 (E)
CRT TIMER DISPLAY (PAGE5) 44 (E)

D
Data reset 88 (E)
DQP 53 (E)

E
Error codes 101 (E)
Error code window 101 (E)

F
Factory preset 89 (E)

G
Grips
  inserting 8 (E)
  removing 9 (E)

H
H/C SYNC: (PAGE 4) 43 (E)

I,J,K
INPUT SIGNAL: (PAGE 4) 43 (E)
Inserting the grips 8 (E)
Installation
  ceiling installation 11 (E)
  diagrams 5 (E)
  floor installation for front projection 10 (E)
  floor installation for rear projection 13 (E)
  procedures 4 (E)
Installing
  batteries to the remote control 37 (E)
  optional interface board 30 (E)

L
List
  messages 95 (E)
  projection distance by optical axis angle 102 (E)
  test patterns 46 (E)
Location and function of connectors 27 (E)

M
Memory
  architecture 79 (E)
  structure 78 (E)

N,O
Notes on screen
  available types of screen 16 (E)
  screen size 15 (E)
  with an aspect ratio other than 4:3 15 (E)

P,Q
PAGE displays 42 (E)
PIC MUTING (PAGE 1) 42 (E)
Protecting the setting 91 (E)

R
REGI BLOCK: (PAGE 4) 43 (E)
Remote control
  battery installation 37 (E)
  preparation 36 (E)
Releasing the blanking 59 (E)
Removing the grips 9 (E)
Resetting
  data 88 (E)
  standard data to the factory preset levels 89 (E)
Ring spacers 18 (E)

S
Saving the data
  memory architecture 79 (E)
  memory structure 78 (E)
  saving the standard registration data 77 (E)
Screen
  available types 16 (E)
  size 15 (E)
  with an aspect other than 4:3 15 (E)
Screen messages
  color codes 45 (E)
  error messages 45 (E)
Setting
  dynamic picture 25 (E)
  white balance 85 (E)
STATUS: (PAGE 1) 42 (E)
SYNC ON G: (PAGE 4) 43 (E)

T
Test patterns 46 (E)
Turning off "OFF" indication 94 (E)

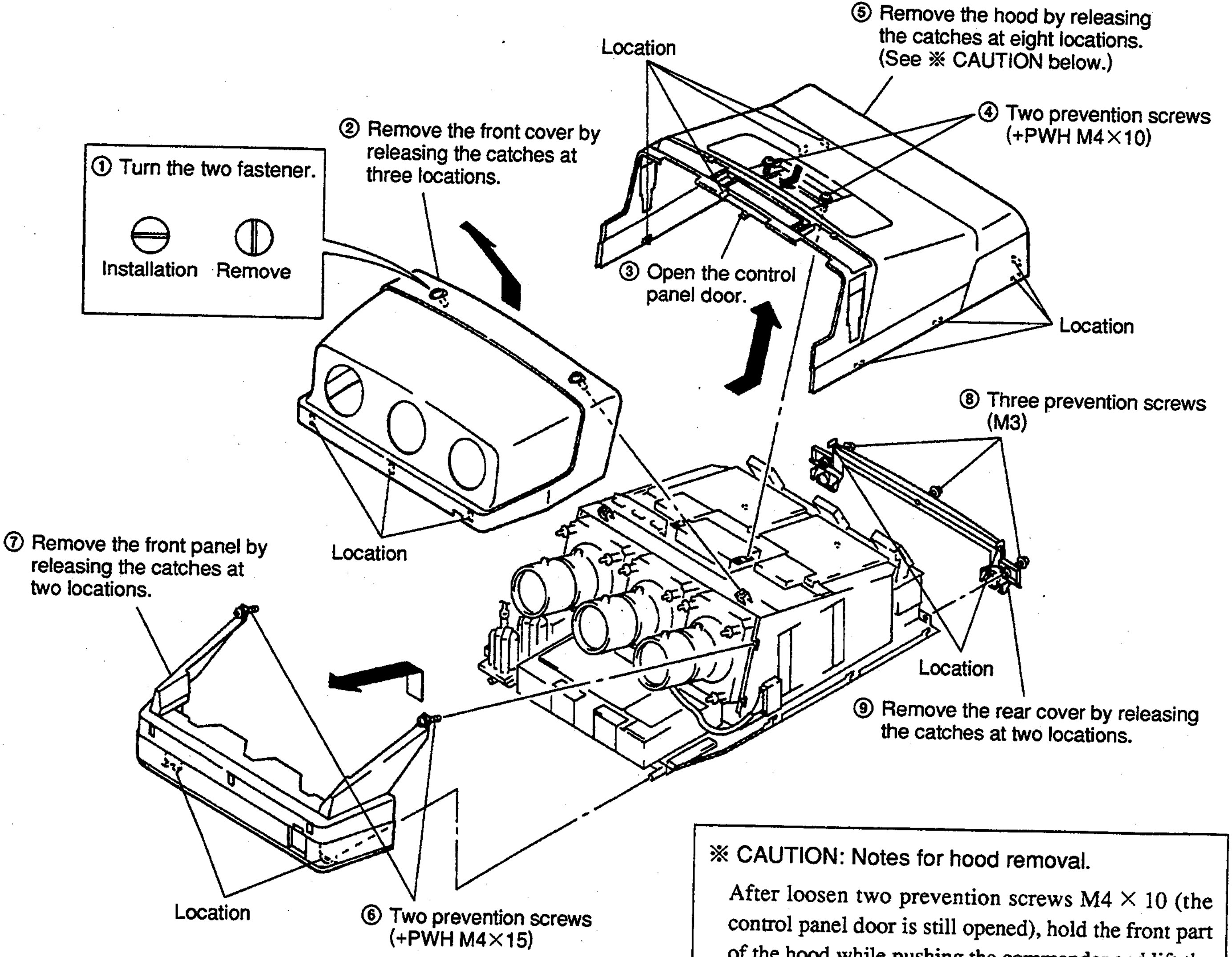
U
Using the side handles 8 (E)

V
V-SHIFT: (PAGE 3) 43 (E)
V-SYNC: (PAGE 4) 43 (E)

W
What is blanking? 60 (E)
What is the AQP/DQP adjustment? 53 (E)
When the screen size is not mentioned in the tables 12 (E)

SECTION 2
DISASSEMBLY

2-1. COVER REMOVAL



① Turn the two fastener.

② Remove the front cover by releasing the catches at three locations.

③ Open the control panel door.

④ Two prevention screws (+PWH M4×10)

⑤ Remove the hood by releasing the catches at eight locations. (See ※ CAUTION below.)

⑥ Two prevention screws (+PWH M4×15)

⑦ Remove the front panel by releasing the catches at two locations.

⑧ Three prevention screws (M3)

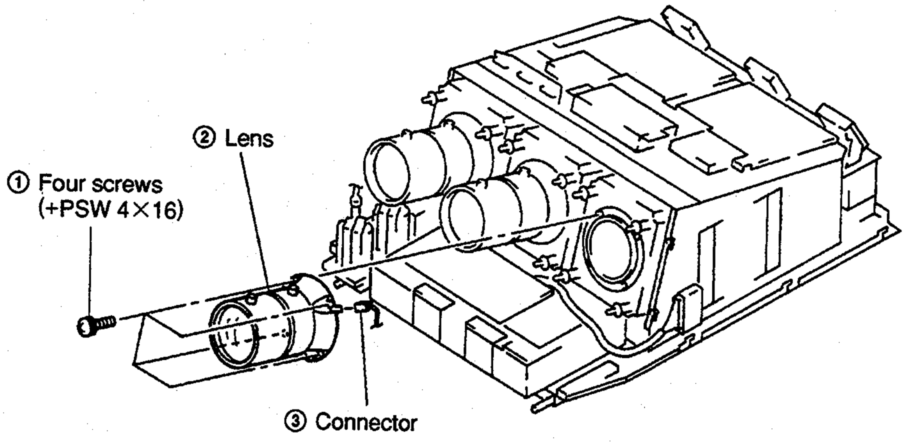
⑨ Remove the rear cover by releasing the catches at two locations.

※ CAUTION: Notes for hood removal.

After loosen two prevention screws M4 × 10 (the control panel door is still opened), hold the front part of the hood while pushing the commander and lift the hood 10mm then shift it above the commander.

After confirmed shifted, slide the whole hood to the rear 20mm and remove it above.

2-2. LENS REMOVAL

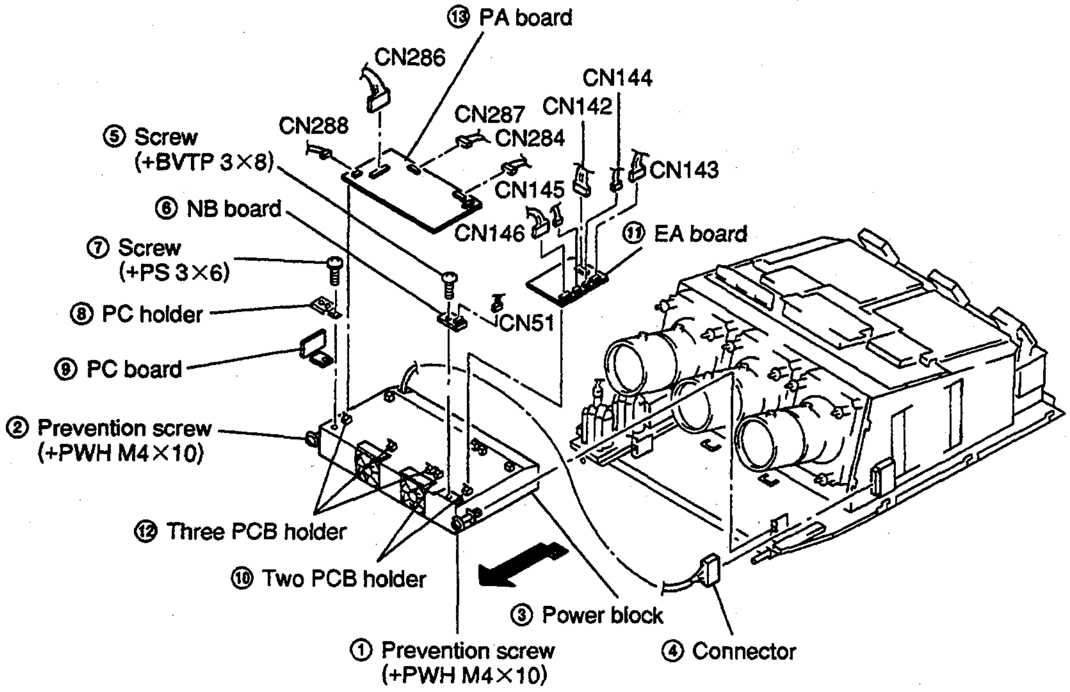


① Four screws (+PSW 4×16)

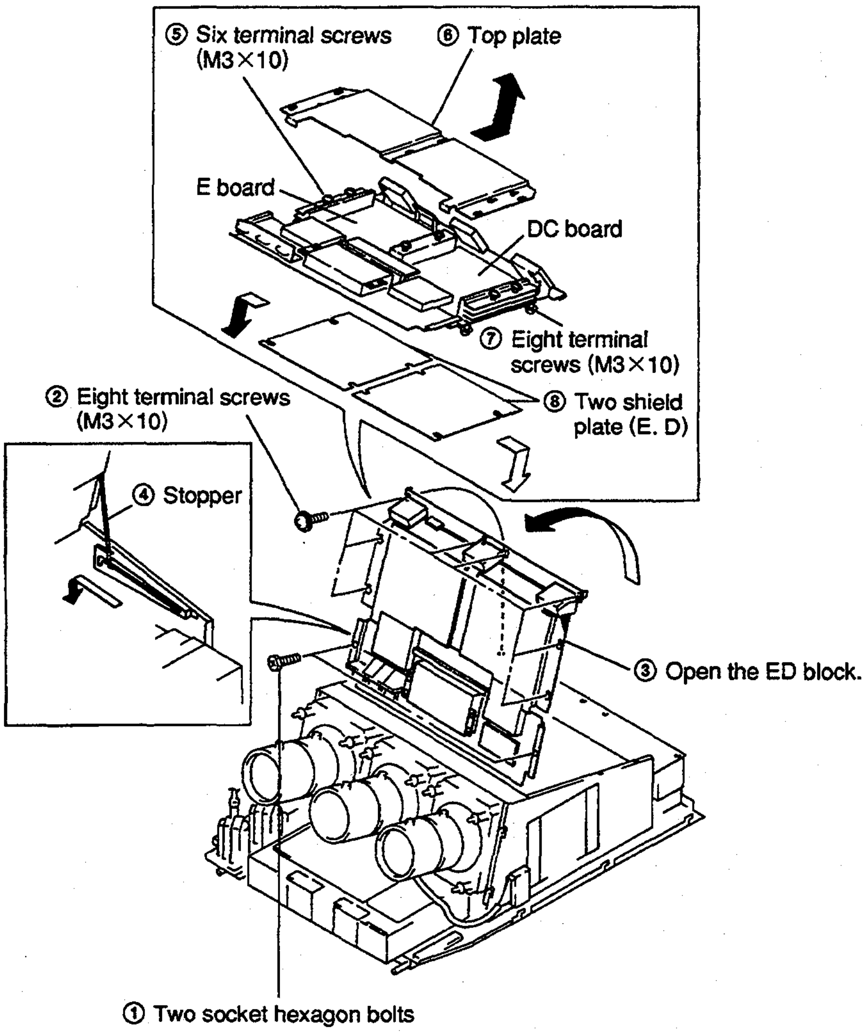
② Lens

③ Connector

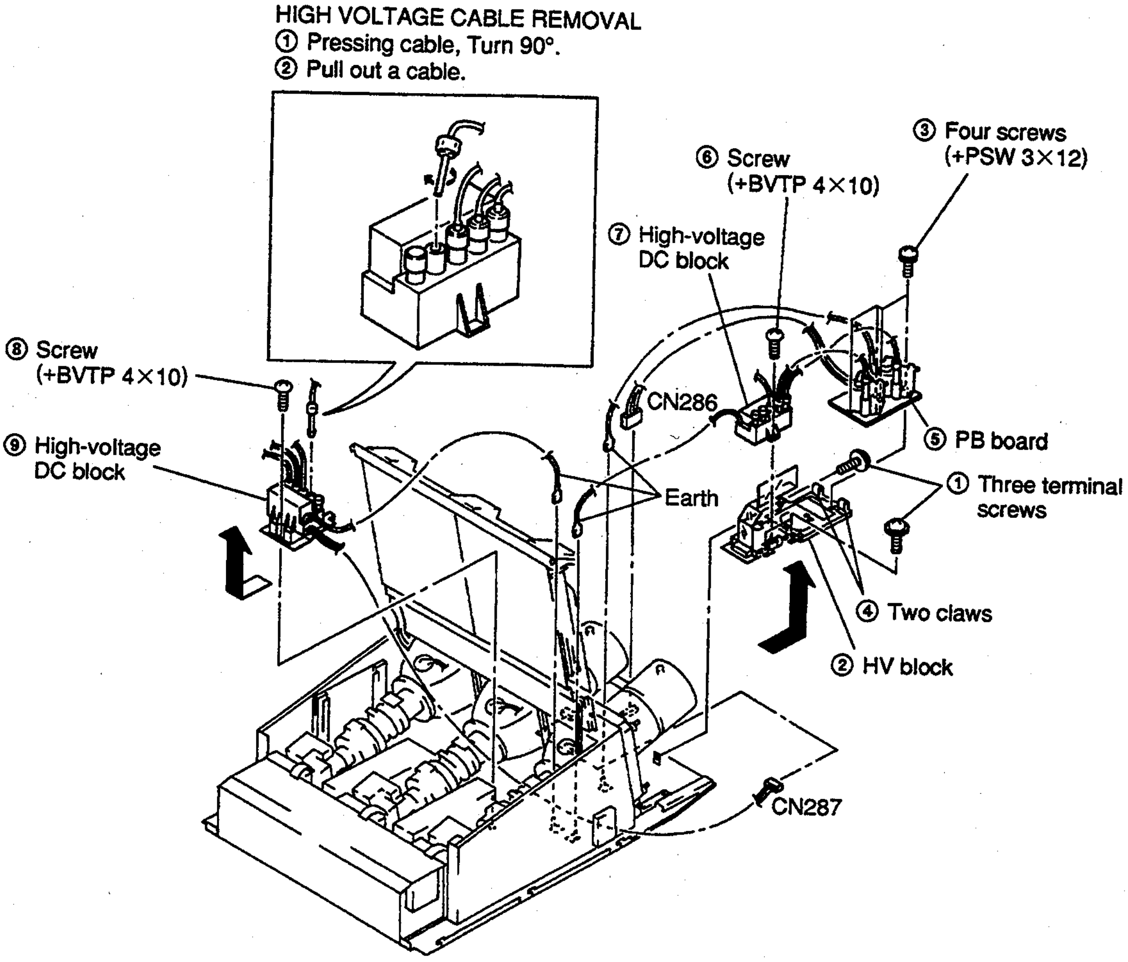
2-3. POWER BLOCK REMOVAL


⑬ PA board
CN286
CN144
CN288
CN287
CN142
⑤ Screw
(+BVTP 3×8)
CN284
CN143
CN145
⑥ NB board
CN146
⑪ EA board
⑦ Screw
(+PS 3×6)
⑧ PC holder
CN51
⑨ PC board
② Prevention screw
(+PWH M4×10)
⑫ Three PCB holder
⑩ Two PCB holder
③ Power block
① Prevention screw
(+PWH M4×10)
④ Connector

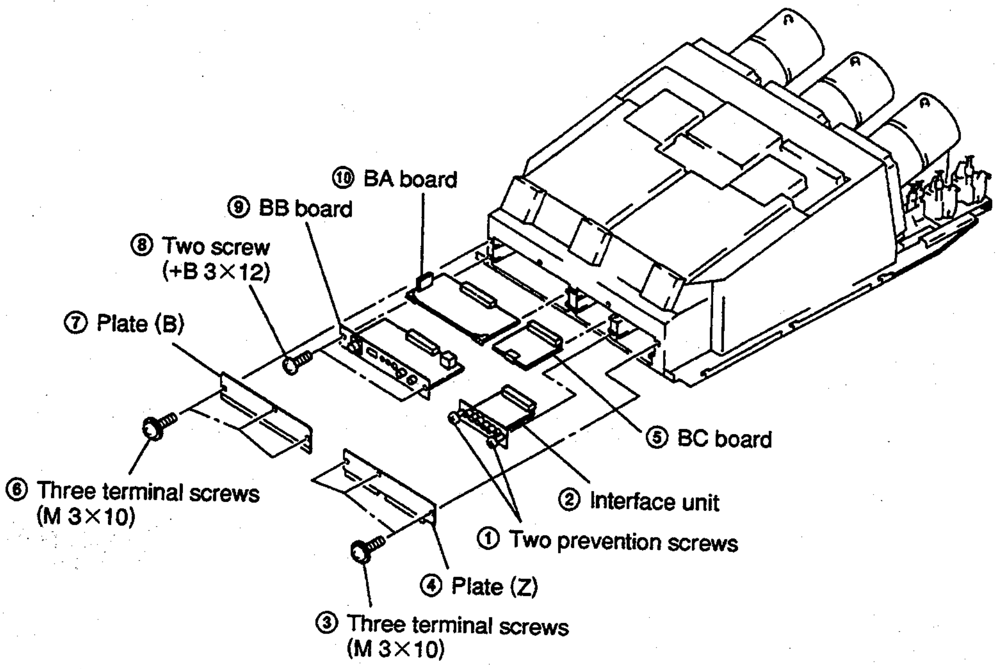
2-4. ED BLOCK REMOVAL


⑤ Six terminal screws
(M3×10)
⑥ Top plate
E board
DC board
⑦ Eight terminal
screws (M3×10)
② Eight terminal screws
(M3×10)
⑧ Two shield
plate (E. D)
④ Stopper
③ Open the ED block.
① Two socket hexagon bolts

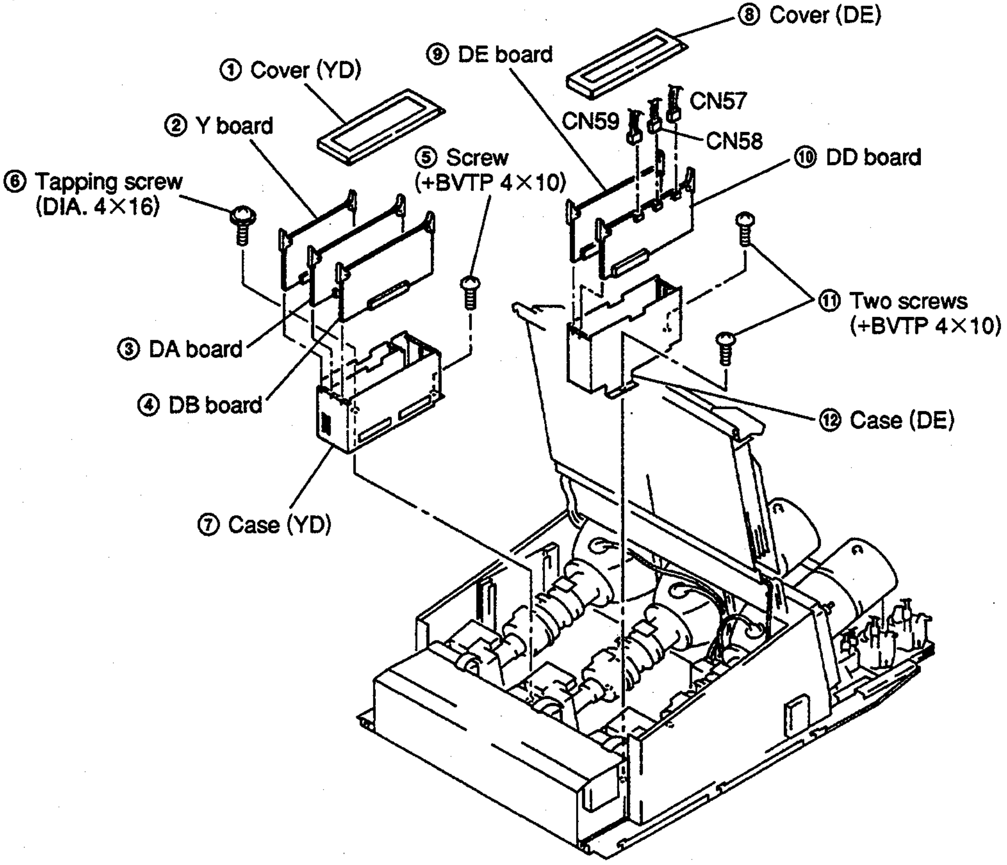
2-5. HIGH-VOLTAGE BLOCK REMOVAL


HIGH VOLTAGE CABLE REMOVAL
① Pressing cable, Turn 90°.
② Pull out a cable.
③ Four screws (+PSW 3×12)
⑥ Screw (+BVTP 4×10)
⑦ High-voltage DC block
⑧ Screw (+BVTP 4×10)
⑨ High-voltage DC block
CN286
⑤ PB board
① Three terminal screws
Earth
④ Two claws
② HV block
CN287

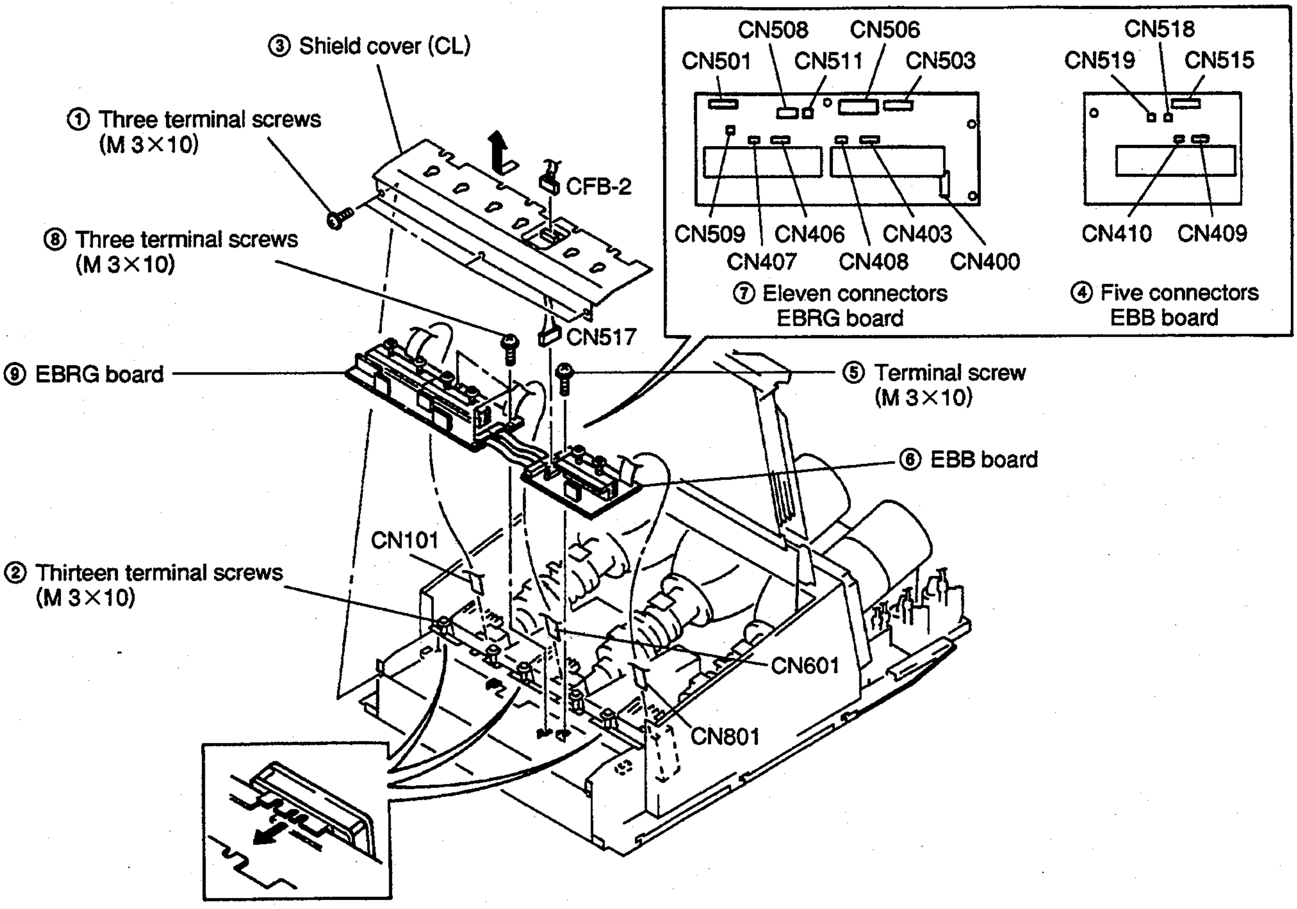
2-6. INTERFACE UNIT, BA, BB AND BC BOARDS REMOVAL


⑩ BA board
⑨ BB board
⑧ Two screw (+B 3×12)
⑦ Plate (B)
⑤ BC board
⑥ Three terminal screws (M 3×10)
② Interface unit
① Two prevention screws
④ Plate (Z)
③ Three terminal screws (M 3×10)

2-7. Y, DA, DB, DD AND DE BOARDS REMOVAL


⑧ Cover (DE)
⑨ DE board
① Cover (YD)
CN57
CN59
CN58
② Y board
⑩ DD board
⑤ Screw
(+BVTP 4×10)
⑥ Tapping screw
(DIA. 4×16)
⑪ Two screws
(+BVTP 4×10)
③ DA board
④ DB board
⑫ Case (DE)
⑦ Case (YD)

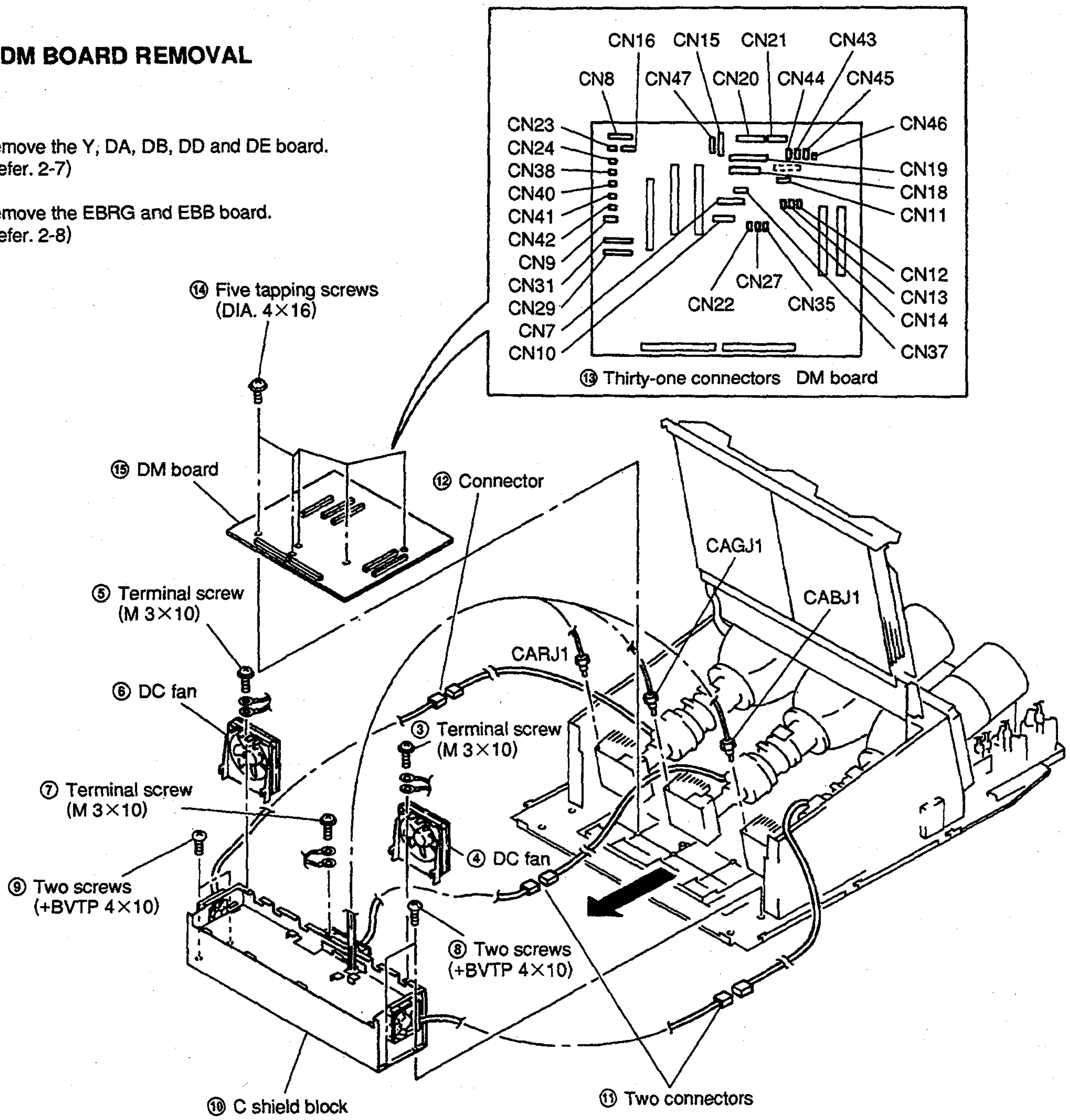
2-8. EBRG AND EBB BOARDS REMOVAL


③ Shield cover (CL)
① Three terminal screws
(M 3×10)
CFB-2
⑧ Three terminal screws
(M 3×10)
CN517
⑨ EBRG board
⑤ Terminal screw
(M 3×10)
⑥ EBB board
CN101
② Thirteen terminal screws
(M 3×10)
CN601
CN801
CN508
CN506
CN501
CN511
CN503
CN509
CN406
CN403
CN407
CN408
CN400
⑦ Eleven connectors
EBRG board
CN518
CN519
CN515
CN410
CN409
④ Five connectors
EBB board

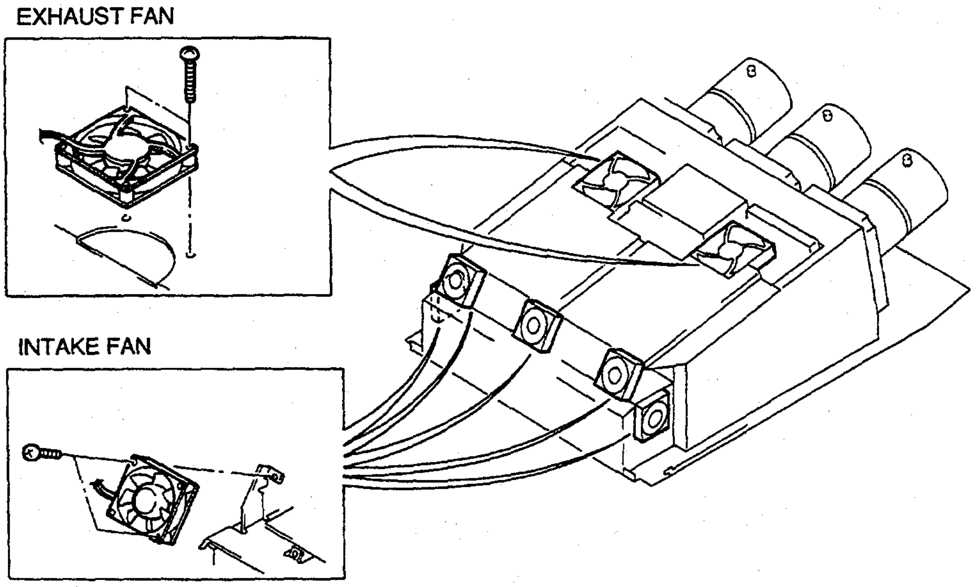
2-9. DM BOARD REMOVAL

① Remove the Y, DA, DB, DD and DE board.
(Refer. 2-7)

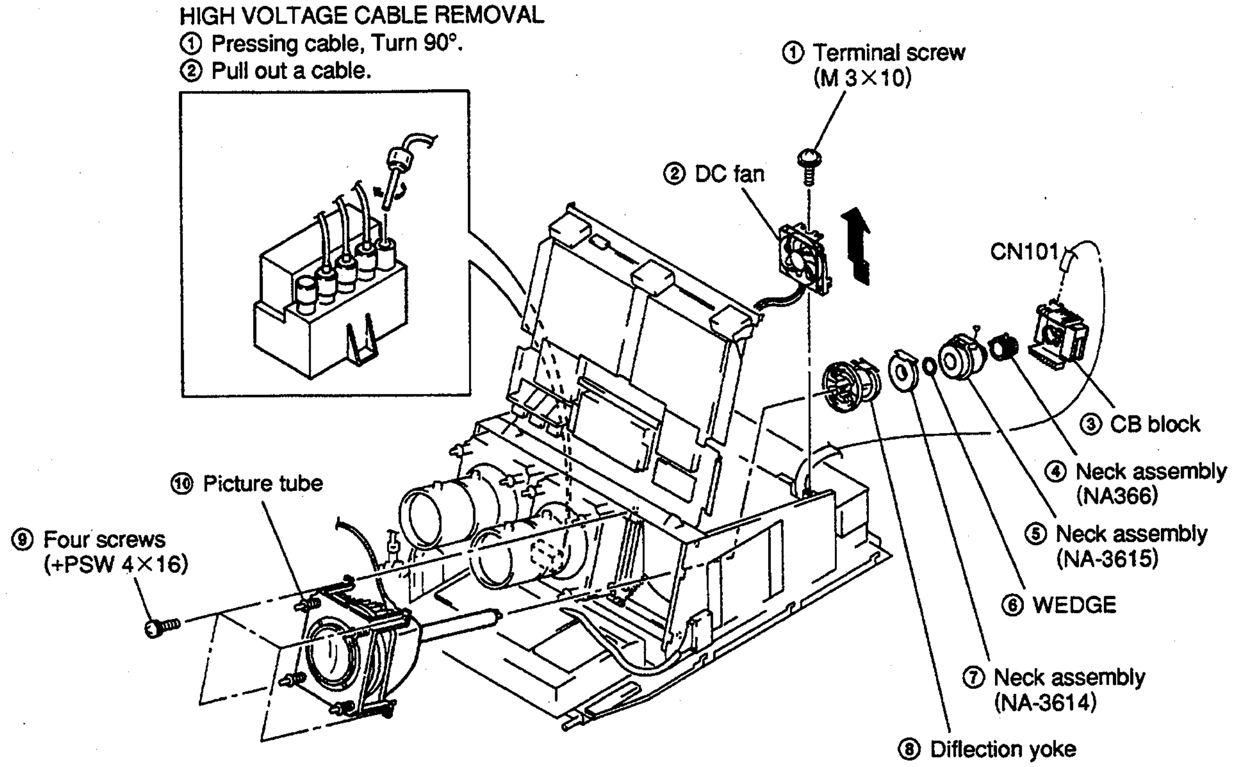
② Remove the EBRG and EBB board.
(Refer. 2-8)


CN16
CN15
CN21
CN43
CN8
CN47
CN20
CN44
CN45
CN23
CN24
CN38
CN40
CN41
CN42
CN9
CN31
CN29
CN7
CN10
CN46
CN19
CN18
CN11
CN12
CN13
CN14
CN37
CN27
CN22
CN35
⑬ Thirty-one connectors DM board
⑭ Five tapping screws (DIA. 4×16)
⑮ DM board
⑫ Connector
⑤ Terminal screw (M 3×10)
⑥ DC fan
CAGJ1
CABJ1
CARJ1
③ Terminal screw (M 3×10)
⑦ Terminal screw (M 3×10)
④ DC fan
⑨ Two screws (+BVTP 4×10)
⑧ Two screws (+BVTP 4×10)
⑩ C shield block
⑪ Two connectors

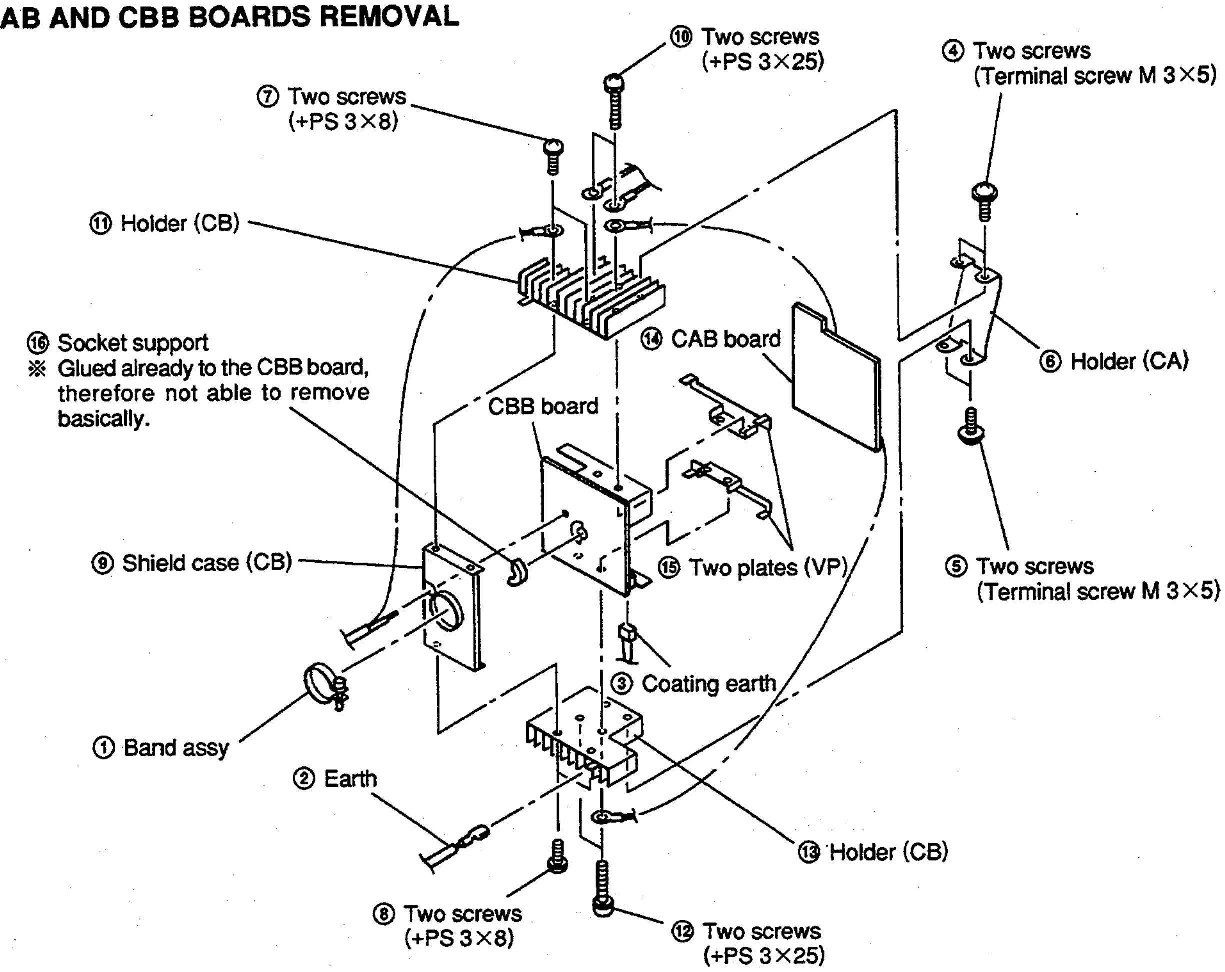
2-10. ATTACHMENT DIRECTION OF THE DC FAN


EXHAUST FAN
INTAKE FAN

2-11. PICTURE TUBE REMOVAL


HIGH VOLTAGE CABLE REMOVAL
① Pressing cable, Turn 90°.
② Pull out a cable.
① Terminal screw
(M 3×10)
② DC fan
CN101
③ CB block
④ Neck assembly
(NA366)
⑤ Neck assembly
(NA-3615)
⑥ WEDGE
⑦ Neck assembly
(NA-3614)
⑧ Diflection yoke
⑩ Picture tube
⑨ Four screws
(+PSW 4×16)

2-12. CAB AND CBB BOARDS REMOVAL


⑩ Two screws
(+PS 3×25)
④ Two screws
(Terminal screw M 3×5)
⑦ Two screws
(+PS 3×8)
⑪ Holder (CB)
⑯ Socket support
※ Glued already to the CBB board, therefore not able to remove basically.
⑭ CAB board
⑥ Holder (CA)
CBB board
⑨ Shield case (CB)
⑮ Two plates (VP)
⑤ Two screws
(Terminal screw M 3×5)
③ Coating earth
① Band assy
② Earth
⑬ Holder (CB)
⑧ Two screws
(+PS 3×8)
⑫ Two screws
(+PS 3×25)

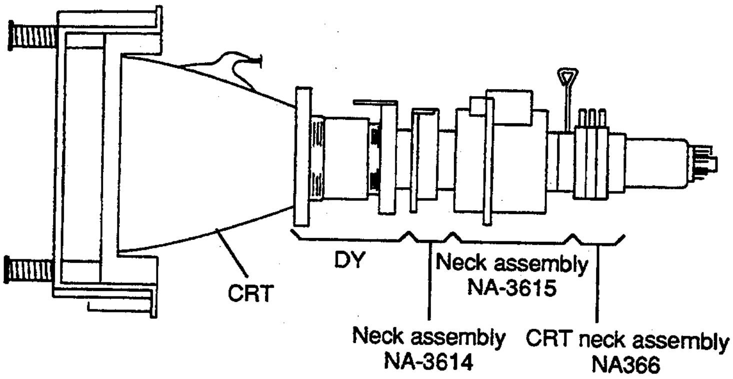
SECTION 3
SET-UP ADJUSTMENT

Note:

- When exchanging CRT, fit tightly DY to CRT, set neck assembly position and adjust.
- Service mode is released when the power is turned OFF.

3-1. NECK ASSEMBLY INSTALLATION

1. Fit DY tightly to CRT funnel first and then tightly fit Sub DY.
2. Temporary install 2-pole and 4-pole magnet assembly 6 to 8 mm away from left DY.
3. Install the CB board.


CRT
DY
Neck assembly
NA-3615
Neck assembly
NA-3614
CRT neck assembly
NA366

3-2. WORK CONDITION FOR ADJUSTMENT

(1) Projection System

1. Place a projector on a work bench which satisfies the projection conditions shown in Figure 1. (Refer to Figures 1-1, 1-2, 1-3.)

(2) Power Supply

1. AC power input conditions

For J models .... AC 100 V
For U/C models .... AC 120 V
For AEP models .... AC 240 V

Frequency for the above power supplies must be 50 Hz with distortion of 3 % or less.

* When an adjustable power transformer is used, the transformer must have capacity of 1.5 kW or more.

(3) Signal

1. Use the video signal specified by Figure 2.

NTSC (3.58)	NTSC (4.43)	PAL	SECAM
Color bar Monoscope D monoscope Dot All white	Color bar	SP color bar Color bar	Color bar

Figure 2

2. Use the VTR (VHS) having S. VIDEO output to supply the S. VIDEO signal.
3. Use the ASTRO VG-819 to which the exclusive ROM (for VPH-1292) is attached to supply the RGB signal.

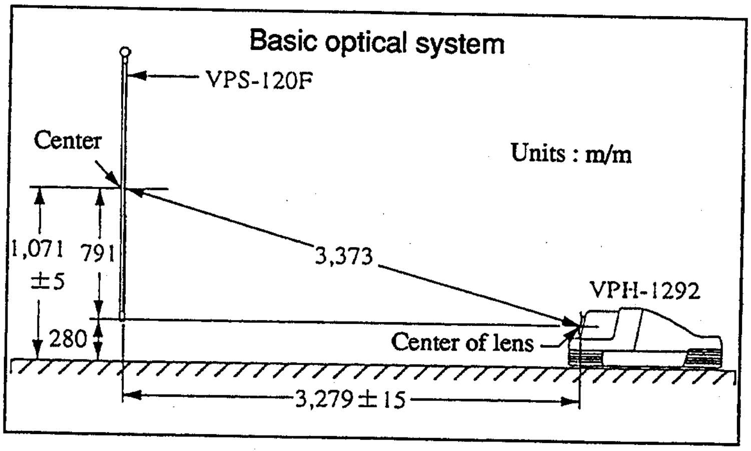

Basic optical system
VPS-120F
Center
Units : m/m
1,071
±5
791
280
3,373
VPH-1292
Center of lens
3,279±15

Figure 1-1

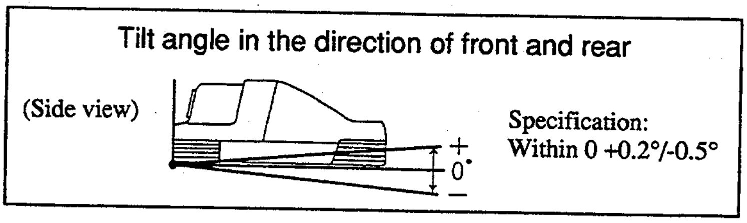

Tilt angle in the direction of front and rear
(Side view)
+
0°
−
Specification:
Within 0 +0.2°/-0.5°

Figure 1-2

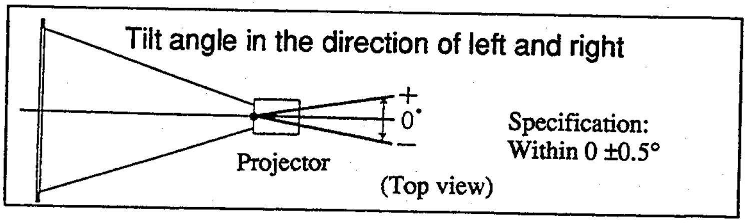

Tilt angle in the direction of left and right
+
0°
−
Projector
(Top view)
Specification:
Within 0 ±0.5°

Figure 1-3

3-3. FOCUS ADJUSTMENT

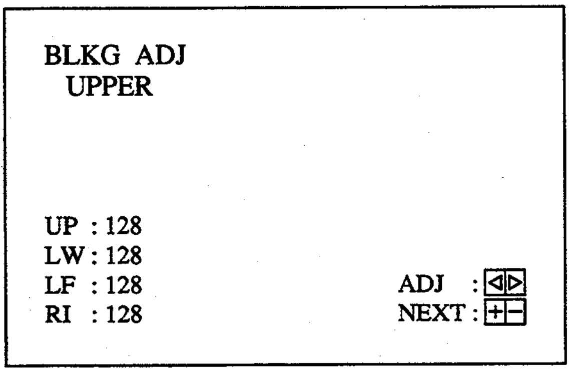
3-3-1. Preparation

1. Connect the video signal to the VIDEO-IN connector, the RGB signal cable to the RGB input connector of SLOT-A terminal and the remote control cable to the CONTROL-S connector respectively.
2. Adjust RV104 on the E board for about 50 %.
3. Press the POWER ON key to turn on the main power to the projector.
4. Open the ED bracket and set the switch No. 1 of the SW-1 on the Y board to OFF (bottom) position.
5. Press the SW-2 (push switch) to reset all the data.

* When the switch is pressed, the LED on the Y board flashes momentarily.

3-3-2. Focus Rough Adjustment

1. Press the INPUT-B key to disconnect all input signals.
2. Press the BLK key and confirm that the projector enters the blanking adjustment mode, and the message appears as shown in Figure 3.



```
BLKG ADJ
 UPPER




UP  : 128
LW  : 128
LF  : 128                ADJ  :◁▷
RI  : 128                NEXT :+−
```

Figure 3

3. Keep pressing the ▲ key of the arrow keys and confirm that the UP data on the message display changes linearly from 128 to MAX while synchronizing with the blanking on top of the display moved outside the screen.
4. Press the (+) key of the POSITION keys to enter the lower blanking adjustment mode.
5. Keep pressing the ▼ key of the arrow keys and confirm that the LW data on the message display changes linearly from 128 to MIN while synchronizing with the lower blanking moved outside the screen.
6. Press the (+) key of the POSITION keys to enter the left blanking adjustment mode.
7. Keep pressing the ◀ key of the arrow keys and confirm that the LF data on the message display changes linearly from 128 to MIN while synchronizing with the left blanking moved outside the screen.
8. Press the (+) key of the POSITION keys to enter the right blanking adjustment mode.
9. Keep pressing the ▶ key of the arrow keys and confirm that the RI data on the message display changes linearly from 128 to MAX while synchronizing with the right blanking moved outside the screen.
10. Press the MEMORY key to store the blanking data.
11. Press the NORMAL key to clear the BLK character display.
12. Close the ED bracket.
13. Press the TEST key to show the internal cross-hatched signal.
14. Adjust the main lens focus controls of the R. G. B. channels respectively to adjust roughly their center focus. Adjust the sub lens focus controls of the R. G. B. channels respectively to adjust roughly their corner focus.

3-3-3. Centering and Size Preliminary Adjustments

1. Press the VIDEO key to select the monoscope input signal to show on the screen.
2. Press the R key and the B key of the CENT keys simultaneously to enter the green channel centering adjustment.
3. Use the ◀, ▶, ▲, ▼ keys of the arrow keys until the vertical line and the horizontal line of the cross-hair come to the enter of screen.
4. Press the R key of the CENT keys to select the red channel and adjust the red channel centering in the same way.
5. Press the B key of the CENT keys to select the blue channel and adjust the blue channel centering in the same way.
6. Press the SIZE key of the REGISTRATION and press the ADJ. G key.
7. Use the ◀ and ▶ keys of the arrow keys until both ends of the cross-hair extend to the full size of the screen.
8. Press the MEMORY key.

3-3-4. Angle Adjustment of DY, Sub DY and Mg Focus

1. Press the INPUT B key to disconnect all input signals.
2. Press the R key and B key of the CENT keys to enter the green channel centering adjustment mode.
3. Open the ED bracket and rotate the red DY to the left about 30° and the blue DY to about to the right about 30°.
4. Adjust roughly tilt of R, G, and B channels so that their sub DY and Mg focus connectors come to the top.

5. Adjust angle of the green DY until the horizontal line of the cross hair is aligned to the horizontal line of the screen. Then tighten the green DY.

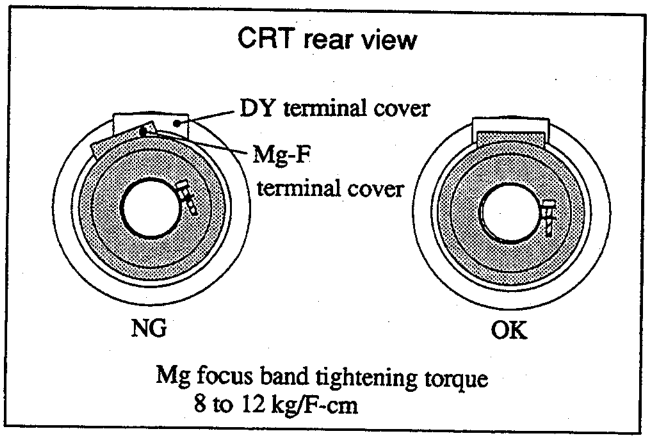
- * The green DY must be tightly fit to the CRT funnel.
- * DY band tightening torque
  8 to 12 kg/F-cm

6. Adjust the red and blue DYs in the same way.
7. Press the LIN key of the REGISTRATION and press the ADJ. G key.
8. Press the CUT OFF R key and B key to show green only.
9. Use the ◀ and ▶ keys of the arrow keys to change linearity between MIN and MAX and observe that both ends of the cross-hair change while maintaining a constant distance from the horizontal line of the screen. If a constant distance is not maintained, adjust angle of the sub DY until a constant distance between both ends of the cross-hair and the horizontal line of the screen is maintained. After completing adjustment, tighten the sub DY.

- * The sub DY must be tightly fit to the DY.
- * Sub DY band tightening torque
  8 to 12 kg/F-cm

10. Adjust roughly linearity.
11. Press the CUT OFF R key and the G key to show red only. Adjust the red sub DY angle in the same way.
12. Press the CUT OFF B key and the R key to show blue only. Adjust the blue sub DY angle in the same way.
13. Adjust position of the green Mg focus until it is aligned with the green DY as shown. (Refer to Figure 4.)

- * The Mg focus must be tightly fit to the sub DY.



CRT rear view

Mg focus band tightening torque
8 to 12 kg/F-cm

Figure 4

14. Adjust position of the red and blue Mg focuses in the same way.
15. Press the CUT OFF key to shown the three colors of R. G. and B.
16. Release the ED bracket stopper lock and close the ED bracket.

3-3-5. Registration Rough Adjustment

1. Confirm that the ED bracket is closed, and press the INPUT B key to disconnect all input signals.
2. Press the SIZE key of the REGISTRATION, and press the ADJ. G key.
3. Press the CUT OFF R key and B key to show green only.
4. Use the ◀, ▶, ▲, ▼ keys of the arrow keys until the outermost line of the cross-hair is positioned 20 to 40 m/m inside the outermost line of the effective display of the screen.

- * If linearity error is found, adjust size and linearity until both size and linearity are correctly adjusted at the same time.

5. Press the KEY key and use the ◀, ▶, ▲, ▼ keys of the arrow keys to adjust the trapezoidal distortion.
6. Press the BOW key and use the ◀, ▶, ▲, ▼ keys of the arrow keys until the vertical and horizontal center lines become straight.
7. Press the SKEW key and use the ◀, ▶ keys of the arrow keys until the vertical line agrees with the vertical center line of the screen.
8. Press the PIN key and use the ▲, ▼ keys of the arrow keys until the upper and lower horizontal lines become straight.
9. Press the CUT OFF R key and ADJ. R key.
10. Adjust the red channel CENT, SIZE, LIN, BOW SKEW (H only), PIN and KEY until red image agrees with the green image in the same way.
11. Press the CUT OFF R key, B key and ADJ. B key.
12. Adjust the blue channel CENT, SIZE, LIN, BOW SKEW (H only), PIN and KEY until blue image agrees with the green image in the same way.
13. Press the NORMAL key.
14. Press the CUT OFF R key to show the R, G, and B colors.
15. Press the TEST key to show the cross hatch signal.
16. Confirm that registration of red, green and blue is approximately adjusted.
17. Press the NORMAL key.

3-3-6. 2-pole/4-pole Magnet Adjustment

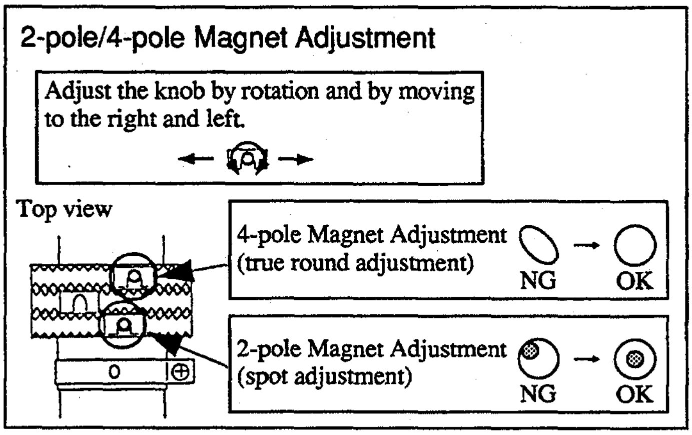
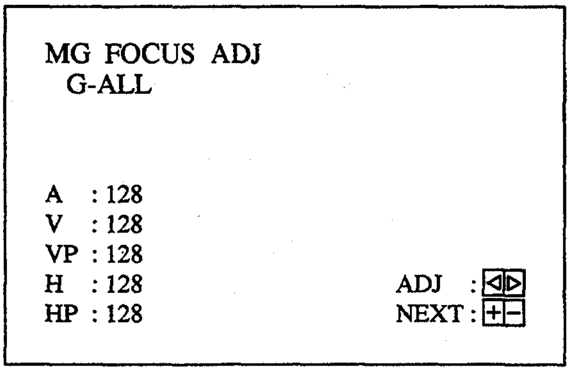

2-pole/4-pole Magnet Adjustment
Adjust the knob by rotation and by moving to the right and left.
Top view
4-pole Magnet Adjustment (true round adjustment)
NG
OK
2-pole Magnet Adjustment (spot adjustment)
NG
OK
0

Figure 5

1. Press the INPUT B key to disconnect all input signals.
2. Press the TEST key to show the cross hatch signal.
3. Open the ED bracket and place a shield plate which is equivalent to the ED bracket on top of the DY.
4. Press the FOCUS MG key. Press the ADJ. G key to enter the G. ALL of the MG FOCUS adjustment mode.
5. Confirm that the display shown in Figure 6 appears on screen.



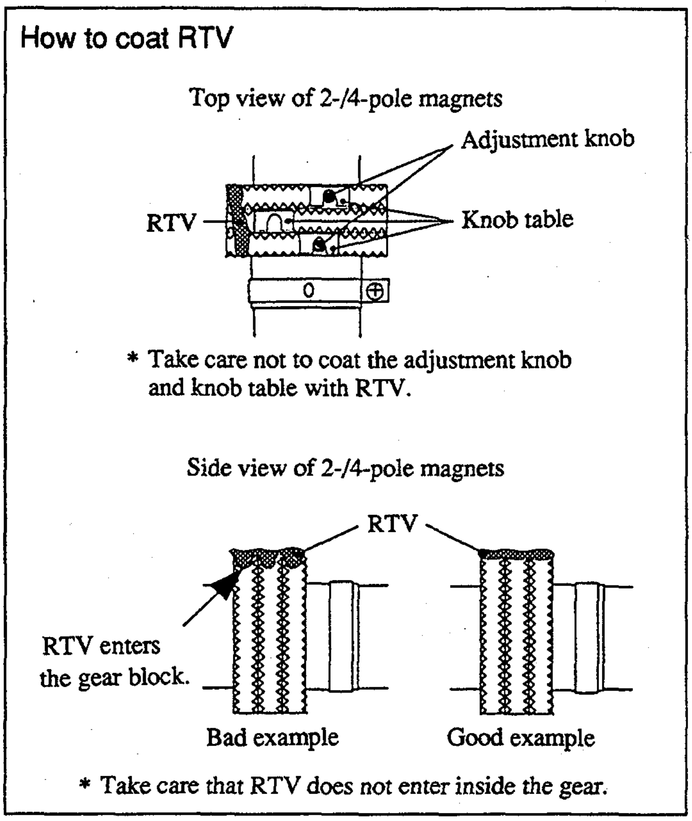
```
MG FOCUS ADJ
  G-ALL


A   : 128
V   : 128
VP  : 128
H   : 128                    ADJ  : ◁▷
HP  : 128                    NEXT : ⊞⊟
```

Figure 6

6. Press the TEST key to show the internal dot signal.
7. Press the ◀ key of the arrow keys until data A becomes MIN, and flare appears around the dots.
8. Press the CUT OFF R and B keys to show the green color only.
9. Observe the dot at the center of screen and adjust 2-pole magnet until the bright spot comes to the center of flare.
10. Press the ▶ key of the arrow keys until data A becomes MAX.
11. Adjust the 4-pole magnet until dot becomes true round.
12. Adjust the 2-pole and 4-pole magnets several times until both adjustments are satisfied at the same time.

* The 2-pole and 4-pole magnets must be tightly fit to the FOCUS magnet.

13. Adjust the 2-pole and 4-pole magnets of red and blue channels in the same way.
14. Coat the 2-pole and 4-pole magnets of red, green and blue channels with the RTV and fix them. (See Figure 7.)


How to coat RTV
Top view of 2-/4-pole magnets
Adjustment knob
RTV
Knob table
0
Side view of 2-/4-pole magnets
RTV
RTV enters the gear block.
Bad example
Good example

* Take care not to coat the adjustment knob and knob table with RTV.

* Take care that RTV does not enter inside the gear.

Figure 7

15. Press the CENT key and arrow keys until centers of the red, green and blue channels agree.
16. Press the MEMORY key.

3-3-7. VIDEO Center Size Adjustment

1. Press the INPUT VIDEO key to input and show the monoscope signal.
2. Press the SHIFT keys of RGB channels. Use the ◀, ▶ keys of the arrow keys until H center of the monoscope signal agrees with the center of screen.

   * If V. centers of the RGB channels have error, adjust the V. center again using DA board RV4.

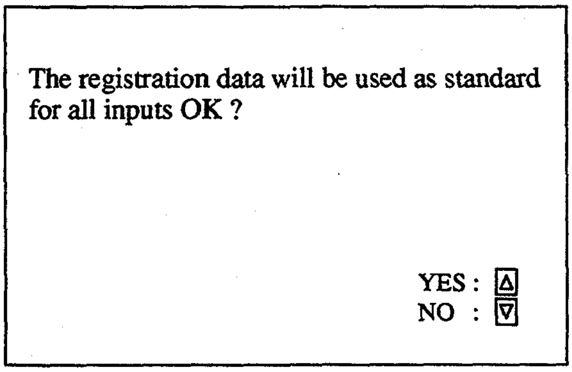
3. Press the SIZE key of the RGB channels and use the ◀, ▶, ▲, ▼ keys of the arrow keys until the H. size and V. size of RGB channels agree.

   * H. and V. size adjustment specification using monoscope signal
   H. size .... 16 ±0.15 divisions
   V. size .... 12 ±0.15 divisions

4. Press the MEMORY key.

3-3-8. Standard Data Save

1. Keep pressing the MEMORY key for 5 seconds or longer and confirm that the message as shown in Figure 8 appears.



The registration data will be used as standard for all inputs OK ?

YES : △
NO : ▽

Figure 8

2. Press the ▲ key of the arrow keys to save the standard data.

3-3-9. Centering Adjustment During No Input Signal

1. Press the INPUT A key to receive and show the RGB signal of fH: 35 kHz.
2. Open the ED bracket. Set the 4th switch of SW-1 on the Y board to OFF (lower) position. Close the bracket.
3. Press the CENT R key and B key to enter the green center adjusting adjustment.
4. Use the ◀, ▶, ▲, ▼ keys of the arrow keys until vertical line and horizontal line of the cross hair agree with the center lines of the screen.
5. Press the INPUT B key to remove all input signals.
6. Press the SHIFT key of the RGB channels. Press the TEST key to show the cross hair signal.
7. Press the CUT OFF R key and B key to show the green color only.
8. Use the ◀, ▶ keys of the arrow keys so that the vertical line of the cross hair agrees with the center line of the screen.
9. Press the MEMORY key.
10. Open the ED bracket. Set the 4th switch of SW-1 on the Y board to ON (upper) position. Close the bracket.
11. Press the NORMAL key.

3-3-10. HWC Adjustment

1. Press the INPUT VIDEO key to receive and show the monoscope signal.
2. Select the SIZE key of the REGISTRATION, and press the ADJ. G key.
3. Confirm that the H. size data is 128.

   * If the data is not 128, press the ◀, ▶ keys of the arrow keys to obtain the data 128.

4. Press the ADJ. R key and confirm that the H. size data is 128.
5. Press the ADJ. B key and confirm that the H. size data is 128.
6. Press the CENT R key and B key at the same time to enter the green center adjustment mode.
7. Use the ◀, ▶, ▲, ▼ keys of the arrow keys until vertical and horizontal lines agree with the center lines of the screen.
8. Press the ADJ. R key and the red channel center in the same way.
9. Press the ADJ. B key and the blue channel center in the same way.
10. Press the MEMORY key.
11. Find the channel having the biggest H. size between the red, green and blue channels. Adjust HWC of the E board until the H. sizes of the remaining two colors agree with the biggest H. size.

    * The HWCs are shipped at the MAX (its core is set in the deepest end position) before adjustment. When making adjustment, turn the HWC in counter-clockwise direction.

12. Press the SHIFT key of the RGB channels.
13. Use the ◀ and ▶ keys of the arrow keys until vertical line agrees with the center lines of the screen.
14. Press the MEMORY key.
15. Press the SIZE key of REGISTRATION. Keep pressing the TEST key for five seconds or longer to show the monoscope signal.
16. Keep pressing the ▶ key of the arrow keys until the H. size becomes MAX.
17. Press the LIN key. Use the ◀, ▶ keys of the arrow keys to adjust roughly linearity in the left and right.

    * If the H. center of the monoscope signal has centering error, re-adjust it.

18. Adjust RV104 on the E board until the H. size of monoscope signal becomes 15 divisions.
19. Press the SIZE key of RGB. Press the CUT OFF R key and the B key to show green color only.
20. Use the ◀, ▶ keys of the arrow keys until the H. size of monoscope signal becomes 16 divisions.

21. Use the ▲, ▼ keys of the arrow keys until the V. size of monoscope signal becomes approximately 12 divisions.
22. Open the ED bracket. Adjust RV5 on the DA board until the horizontal center line of the monoscope signal agrees with the center line of the screen. (See Figure 9.)

* The V. center position is affected by opening and closing of the ED bracket. The V. centers of two signals must agree when the ED bracket is closed.

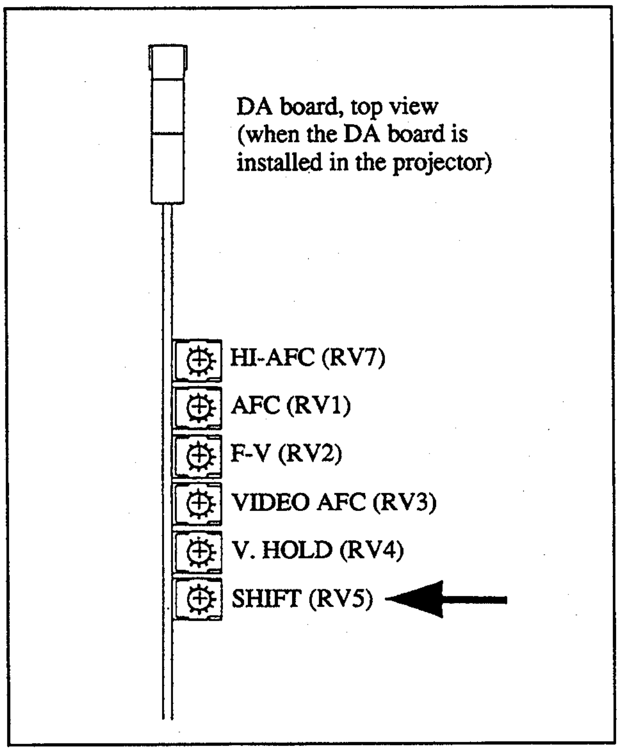
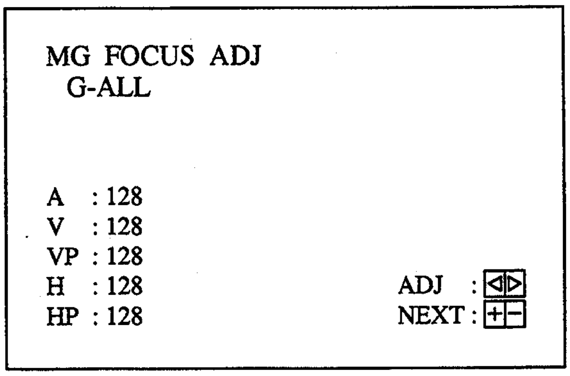


Figure 9

23. Use the ▲, ▼ keys of the arrow keys again until the V. size of monoscope signal becomes 12 divisions.
24. Press the R key of CENT. Press the CUT OFF B key.
25. Use the ◀, ▶, ▲, ▼ keys of the arrow keys until vertical line and horizontal line of the cross hair signal agree with vertical line and horizontal line of the green signal.
26. Press the CUT OFF B key and R key. Press the ADJ. B key and adjust the blue center in the same way.
27. Press the MEMORY key.
28. Press the NORMAL key.

3-3-11. Mg FOCUS/4-pole Mg Adjustment During No Input Signal

1. Press the INPUT B key to disconnect all input signals.
2. Press the FOCUS MG key to enter the Mg FOCUS adjustment mode. Confirm that the display as shown in Figure 10 appears.



MG FOCUS ADJ
G-ALL

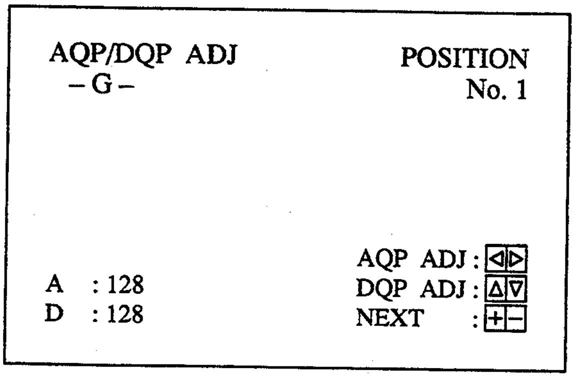
A : 128
V : 128
VP : 128
H : 128
HP : 128

ADJ : ◁▷
NEXT : +−

Figure 10

3. Press the ◀, ▶ keys of the arrow keys so that H. pattern in the center of screen has the best focus in the G-ALL adjustment mode.
4. Adjust the green main lens so that center of screen has the best focus and fix the main lens.
5. Repeat step (3) adjustment.
6. Press the POSITION (+) key to enter the G-V adjustment mode.
7. Keep pressing the ▶ key of the arrow keys so that the H. pattern at the vertical center is de-focused.
8. Press the POSITION (+) key to enter the V-PHASE adjustment mode.
9. Press the ◀, ▶ keys of the arrow keys so that degree of de-focus of the H. patterns in the upper and lower portions are equal.
10. Press the POSITION (-) key to return to the G-V adjustment mode.
11. Press the ◀, ▶ keys of the arrow keys so that the H. pattern at the vertical center has the best focus.
12. Adjust the green main lens until center of display has the best focus and fix the main lens.
13. Repeat the step 11 adjustment again.
14. Repeat the steps from 4 to 9 several times until the best focus is obtained in all adjustment points at the same time.
15. Press the POSITION (+) key to enter the G-H adjustment mode.
16. Keep pressing the ▶ key of the arrow keys so that the H. pattern at the horizontal center is de-focused.
17. Press the POSITION (+) key to enter the H-PHASE adjustment mode.
18. Press the ◀, ▶ keys of the arrow keys so that degree of de-focus of the H. patterns in the right and left portions are equal.
19. Press the POSITION (-) key to return to the G-H adjustment mode.

20. Press the ◀, ▶ keys of the arrow keys so that the H. pattern at the horizontal center has the best focus.
21. Repeat steps from 11 to 17 several times until the best focus is obtained at all adjustment points at the same time.
22. Press the POSITION (+) key to enter the AQP/DQP ADJ - POSITION: 1 adjustment mode. Confirm that the display shown in Figure 11 appears.



AQP/DQP ADJ
-G-

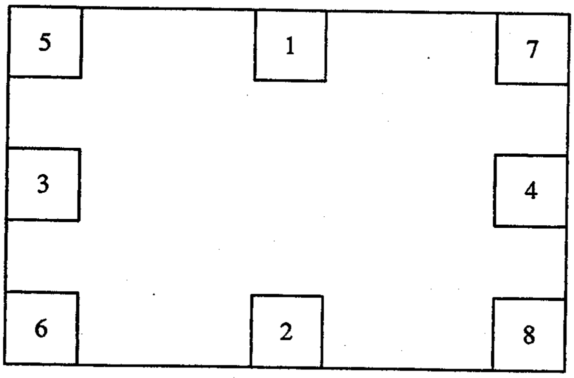
POSITION
No. 1

A : 128
D : 128

AQP ADJ : ◁▷
DQP ADJ : △▽
NEXT : +−

Figure 11

* See Figure 12 for location of POSITION.



* Numbers indicates locations of POSITIONs during AQP/DQP adjustment.

Figure 12

23. Use the ◀, ▶, ▲, ▼ keys of the arrow keys until the H. pattern in the center of the upper portion has the best focus at the same time.
24. Press the POSITION (+) key to enter the AQP/DQP ADJ - POSITION: 2 adjustment mode.
25. Use the ◀, ▶, ▲, ▼ keys of the arrow keys until the H. pattern in the center of the lower portion has the best focus.
26. Select the AQP/DQP ADJ - POSITION: 3 to 8 adjustment modes in the same manner as steps 21 and 22, and adjust until the H pattern has the best focus in each adjustment.
27. Press the ADJ. R key to enter the R-ALL - Mg FOCUS (4-pole) adjustment.
28. Press the ◀, ▶ keys of the arrow keys so that the H. pattern in the center has the best focus in the R-ALL adjustment mode.
29. Press the POSITION (+) key to enter the R-V adjustment mode.
30. Press the ◀, ▶ keys of the arrow keys so that the H. pattern at the vertical center has the best focus.
31. Press the POSITION (+) key to enter the R-H adjustment mode.
32. Press the ◀, ▶ keys of the arrow keys so that the H. pattern at the horizontal center has the best focus.
33. Select the blue channel and adjust the Mg FOCUS (4-pole) in the same manner.
34. Press the MEMORY key to store the Mg FOCUS (4-pole) adjustment data in memory.

3-3-12. 8 Block Mg FOCUS Fine Adjustment

1. Press the INPUT A key to input and show the RGB signal of fH: 15.7 kHz and fV: 60Hz.
2. Press the FOCUS MG key to enter the green channel Mg FOCUS adjustment mode.
3. Press the ◀, ▶ keys of the arrow keys so that H. pattern in the center of screen has the best focus.
4. Press the POSITION (+) key to enter the G-V adjustment mode.
5. Keep pressing the ▶ key of the arrow keys so that the H. pattern in the vertical center is de-focused.
6. Press the POSITION (+) key to enter the V-PHASE adjustment mode.
7. Press the ◀, ▶ keys of the arrow keys so that degree of de-focus of the H. patterns in the upper and lower portions are equal.
8. Press the POSITION (-) key to return to the G-V adjustment mode.
9. Press the ◀, ▶ keys of the arrow keys so that the H. pattern at the vertical center has the best focus.
10. Repeat the steps from 4 to 9 several times until the best focus is obtained in all adjustment points at the same time.
11. Press the POSITION (+) key to enter the G-H adjustment mode.
12. Keep pressing the ▶ key of the arrow keys so that the H. pattern at the horizontal center is de-focused.
13. Press the POSITION (+) key to enter the H-PHASE adjustment mode.
14. Press the ◀, ▶ keys of the arrow keys so that degree of de-focus of the H. patterns in the right and left portions are equal.
15. Press the POSITION (-) key to enter the G-H adjustment mode.
16. Press the ◀, ▶ keys of the arrow keys so that the H. pattern at the horizontal center has the best focus.
17. Repeat steps from 11 to 16 several times until the best focus is obtained at all adjustment points at the same time.
18. Press the ADJ. R key to enter the RED Mg FOCUS - R-All adjustment mode.

19. Press the ◀, ▶ keys of the arrow keys so that the H. pattern at the center has the best focus.
20. Press the POSITION (+) key to enter the R-V adjustment mode.
21. Press the ◀, ▶ keys of the arrow keys so that the H. pattern at the vertical center has the best focus.
22. Press the POSITION (+) key to enter the R-H adjustment mode.
23. Press the ◀, ▶ keys of the arrow keys so that the H. pattern at the horizontal center has the best focus.
24. Press the ADJ. B key to enter the BLUE Mg FOCUS - B-All adjustment mode.
25. Press the ◀, ▶ keys of the arrow keys so that the H. pattern at the center has the best focus.
26. Press the POSITION (+) key to enter the R-V adjustment mode.
27. Press the ◀, ▶ keys of the arrow keys so that the H. pattern at the vertical center has the best focus.
28. Press the POSITION (+) key to enter the R-H adjustment mode.
29. Press the ◀, ▶ keys of the arrow keys so that the H. pattern at the horizontal center has the best focus.
30. Press the MEMORY key to save the Mg FOCUS data of the REG BLOCK No.1 in memory.
31. Switch the RGB input to fH: 31.5 kHz, fH: 48 kHz, fH: 64 kHz, fH: 76 kHz, fH: 89 kHz, fH: 126 kHz and perform the Mg FOCUS adjustment for each fH (REG BLOCK) in the same way as the steps from 1 to 30. Save the adjustment data in memory.

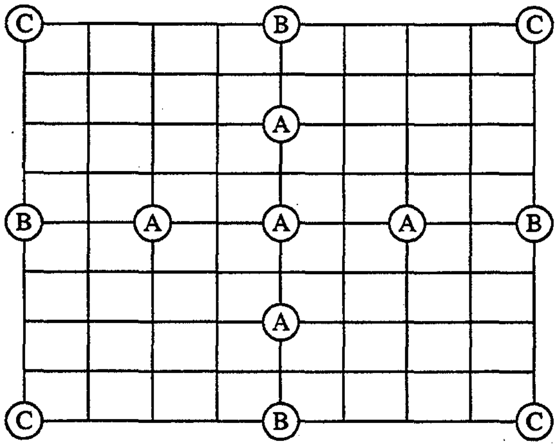
3-4. REGISTRATION ADJUSTMENT

3-4-1. 8 Block Adjustment

1. Press the INPUT A key to input and show the RGB signal of fH: 15.7 kHz.
2. Press the BLKG key to move the upper blanking out of the effective screen using the arrow key ▲.
3. Press the POSITION (+) key to move the lower blanking out of the effective screen using the arrow key ▼.
4. Press the POSITION (+) key to move the left blanking out of the effective screen using the arrow key ◀.
5. Press the POSITION (+) key to move the right blanking out of the effective screen using the arrow key ▶.
6. Press the MEMORY key.
7. Press the CENT R key and B key at the same time to enter the green adjustment mode.
8. Use the ◀, ▶, ▲, ▼ keys of the arrow keys to adjust the vertical lines and horizontal line until they agree with the center lines of the screen.
9. Press the SIZE key of REGISTRATION. Use the ◀, ▶, ▲, ▼ keys of the arrow keys to adjust the outer edge of the cross hair signal until they are positioned about 30 m/m inside the screen.
10. Enter the each mode of LIN, SKEW, BOW, KEY, PIN and ZONE (as to ZONE, adjust No. 2 to 9 blocks only out of 21 blocks), and adjust them until registration satisfies the specification (as shown in Figure 13) using the arrow keys.

* If size causes error, correct it by size adjustment as necessary.

Adjustment specifications of REGISTRATION



Ⓐ : 2m/m or less
Ⓑ : 3m/m or less
Ⓒ : 4m/m or less

Measuring points:
Between centers of spots

Figure 13

11. Press the MEMORY key.
12. Press the CENT R key. Adjust the vertical and horizontal lines of the red channel so that they agree with the green center lines using the ◀, ▶, ▲, ▼ keys of arrow keys.
13. Press the SIZE key of REGISTRATION. Use the ◀, ▶, ▲, ▼ keys of the arrow keys to adjust the outer edge of the cross hair signal until they are positioned about 30 m/m inside the screen.
14. Enter the each mode of LIN, SKEW, BOW, KEY, PIN and ZONE (as to ZONE, adjust No. 2 to 9 blocks only out of 21 blocks), and adjust them until registration satisfies the specification using the arrow keys.

* If size causes error, correct it by size adjustment as necessary.

15. Press the MEMORY key.
16. Adjust the blue channel in the same way, and store the data in memory.
17. Switch the RGB input to fH: 31.5 kHz, fH: 35 kHz, fH: 48 kHz, fH: 64 kHz, fH: 76 kHz, fH: 89 kHz, fH: 126 kHz and perform the green, red and blue channel registration in the same way as fH: 15.7 kHz, and store the data in memory.

3-5. WHITE BALANCE ADJUSTMENT

3-5-1. Color Temperature 9300°K Adjustment (Chromaticity diagram: x = 0.284, y = 0.297)

1. Press the INPUT VIDEO key to input and display the all white signal of 100 IREs.
2. Press the PAGE key to show the PAGE 3 display.
3. Press the ◀, ▶ keys of arrow keys to select 9300. Press the MEMORY key to store it in memory.
4. Press the GAIN key of W/B. Press the ADJ. R key to enter the red adjustment mode.
5. Press the ◀, ▶ keys of arrow keys to select 135 on display.
6. Press the ADJ. G key to enter the green adjustment mode.
7. Press the ◀, ▶ keys of arrow keys to select 195 on display.
8. Press the ADJ. B key to enter the blue adjustment mode.
9. Press the ◀, ▶ keys of arrow keys to select MAX on display.
10. Select the all white signal of 10 IREs.
11. Press the BIAS key. Keep pressing TEST key for five seconds or longer to show the all white signal of 10 IREs.
12. Press the STATUS OFF key to delete the display. Attach the sensor of the W/B measuring equipment.

* W/B measuring equipment (color analyzer)
Model: PWB-801 (made by Sony Corp.)
Calibration coefficient .... R/G: 1.082
B/G: 0.980

13. Press the ADJ. G key. Use the ◀, ▶ keys of arrow keys until the Y value of the W/B measuring equipment becomes 1.00.
14. Press the ADJ. R key. Use the ◀, ▶ keys of arrow keys until the R/G value of the W/B measuring equipment becomes 1.00.
15. Press the ADJ. B key. Use the ◀, ▶ keys of arrow keys until the B/G value of the W/B measuring equipment becomes 1.00.
16. Select the all white signal of 100 IREs.
17. Press the GAIN key to enter the gain adjustment mode.
18. Press the ADJ. B key. Use the ◀, ▶ keys of arrow keys until the B/G value of the W/B measuring equipment becomes 1.00.
19. Press the ADJ. R key. Use the ◀, ▶ keys of arrow keys until the R/G value of the W/B measuring equipment becomes 1.00.
20. Repeat the cut-off adjustment from steps 10 to 15, and the high light adjustment from steps 16 to 19 several times until all these adjustments are satisfied at the same time.
21. If the value satisfying the specification is obtained, press the MEMORY key and store the 9300°K data in memory.

* W/B 9300°K + 8MPCD specifications
Cut-off .... R/G: 1.00 ±0.15
B/G: 1.00 ±0.15
Y : 2.50 ±0.15
High light .... R/G: 1.00 ±0.10
B/G: 1.00 ±0.10

22. Remove sensor from lens.

3-5-2. Color Temperature 6500°K Adjustment (Chromaticity diagram: x = 0.313, y = 0.329)

1. Press the INPUT VIDEO key to input and display the all white signal of 100 IREs.
2. Press the PAGE key to show the PAGE 3 display.
3. Press the ◀, ▶ keys of arrow keys to select 6500. Press the MEMORY key to store it in memory.
4. Press the GAIN key of W/B. Press the ADJ. R key to enter the red adjustment mode.
5. Press the ◀, ▶ keys of arrow keys to select 200 on display.
6. Press the ADJ. G key to enter the green adjustment mode.
7. Press the ◀, ▶ keys of arrow keys to select 230 on display.
8. Press the ADJ. B key to enter the blue adjustment mode.
9. Press the ◀, ▶ keys of arrow keys to select 230 on display.
10. Select the all white signal of 10 IREs.
11. Press the BIAS key. Keep pressing TEST key for five seconds or longer to show the all white signal of 10 IREs.
12. Press the STATUS OFF key to delete the display. Attach the sensor of the W/B measuring equipment.
13. Press the ADJ. G key. Use the ◀, ▶ keys of arrow keys until the Y value of the W/B measuring equipment becomes 1.00.
14. Press the ADJ. R key. Use the ◀, ▶ keys of arrow keys until the R/G value of the W/B measuring equipment becomes 1.16.
15. Press the ADJ. B key. Use the ◀, ▶ keys of arrow keys until the B/G value of the W/B measuring equipment becomes 0.72.
16. Select the all white signal of 100 IREs.
17. Press the GAIN key to enter the gain adjustment mode.
18. Press the ADJ. R key. Use the ◀, ▶ keys of arrow keys until the R/G value of the W/B measuring equipment becomes 1.16.
19. Press the ADJ. B key. Use the ◀, ▶ keys of arrow keys until the B/G value of the W/B measuring equipment becomes 0.72.
20. Repeat the cut-off adjustment from steps 10 to 15, and the high light adjustment from steps 16 to 19 several times until all these adjustments are satisfied at the same time.

21. If the value satisfying the specification is obtained, press the MEMORY key and store the 6500°K data in memory.

* W/B 6500°K + 8MPCD specifications
Cut-off .... R/G: 1.15 ±1.15
B/G: 0.75 ±0.15
Y : 3.00 ±0.10
High light .... R/G: 1.15 ±1.10
B/G: 0.75 ±0.10

22. Remove sensor from lens.

3-5-3. Color Temperature 5400°K Adjustment
(Chromaticity diagram: x = 0.335, y = 0.349)

1. Press the INPUT VIDEO key to input and display the all white signal of 100 IREs.
2. Press the PAGE key to show the PAGE 3 display.
3. Press the ◀, ▶ keys of arrow keys to select 5400. Press the MEMORY key to store it in memory.
4. Press the GAIN key of W/B. Press the ADJ. R key to enter the red adjustment mode.
5. Press the ◀, ▶ keys of arrow keys to select 220 on display.
6. Press the ADJ. G key to enter the green adjustment mode.
7. Press the ◀, ▶ keys of arrow keys to select 230 on display.
8. Press the ADJ. B key to enter the blue adjustment mode.
9. Press the ◀, ▶ keys of arrow keys to select 180 on display.
10. Select the all white signal of 10 IREs.
11. Press the BIAS key. Keep pressing TEST key for five seconds or longer to show the all white signal of 10 IREs.
12. Press the STATUS OFF key to delete the display. Attach the sensor of the W/B measuring equipment.
13. Press the ADJ. G key. Use the ◀, ▶ keys of arrow keys until the Y value of the W/B measuring equipment becomes 1.00.
14. Press the ADJ. R key. Use the ◀, ▶ keys of arrow keys until the R/G value of the W/B measuring equipment becomes 1.28.
15. Press the ADJ. B key. Use the ◀, ▶ keys of arrow keys until the B/G value of the W/B measuring equipment becomes 0.56.
16. Select the all white signal of 100 IREs.
17. Press the GAIN key to enter the gain adjustment mode.
18. Press the ADJ. R key. Use the ◀, ▶ keys of arrow keys until the R/G value of the W/B measuring equipment becomes 1.28.
19. Press the ADJ. B key. Use the ◀, ▶ keys of arrow keys until the B/G value of the W/B measuring equipment becomes 0.56.
20. Repeat the cut-off adjustment from steps 10 to 15, and the high light adjustment from steps 16 to 19 several times until all these adjustments are satisfied at the same time.
21. If the value satisfying the specification is obtained, press the MEMORY key and store the 5400°K data in memory.

* W/B 5400°K + 8MPCD specifications
Cut-off .... R/G: 1.39 ±0.15
B/G: 0.64 ±0.15
Y : 3.00 ±0.10
High light .... R/G: 1.39 ±0.10
B/G: 0.64 ±0.10

22. Remove sensor from lens.

3-5-4. Color Temperature 3200°K Adjustment
(Chromaticity diagram: x = 0.427, y = 0.408)

1. Press the INPUT VIDEO key to input and display the all white signal of 100 IREs.
2. Press the PAGE key to show the PAGE 3 display.
3. Press the ◀, ▶ keys of arrow keys to select 3200. Press the MEMORY key to store it in memory.
4. Press the GAIN key of W/B. Press the ADJ. R key to enter the red adjustment mode.
5. Press the ◀, ▶ keys of arrow keys to select MAX on display.
6. Press the ADJ. G key to enter the green adjustment mode.
7. Press the ◀, ▶ keys of arrow keys to select 170 on display.
8. Press the ADJ. B key to enter the blue adjustment mode.
9. Press the ◀, ▶ keys of arrow keys to select 10 on display.
10. Select the all white signal of 10 IREs.
11. Press the BIAS key. Keep pressing TEST key for five seconds or longer to show the all white signal of 10 IREs.
12. Press the STATUS OFF key to delete the display. Attach the sensor of the W/B measuring equipment.
13. Press the ADJ. G key. Use the ◀, ▶ keys of arrow keys until the Y value of the W/B measuring equipment becomes 1.00.
14. Press the ADJ. R key. Use the ◀, ▶ keys of arrow keys until the R/G value of the W/B measuring equipment becomes 2.25.
15. Press the ADJ. B key. Use the ◀, ▶ keys of arrow keys until the B/G value of the W/B measuring equipment becomes 0.22.
16. Select the all white signal of 100 IREs.
17. Press the GAIN key to enter the gain adjustment mode.
18. Press the ADJ. R key. Use the ◀, ▶ keys of arrow keys until the R/G value of the W/B measuring equipment becomes 2.25.
19. Press the ADJ. B key. Use the ◀, ▶ keys of arrow keys until the B/G value of the W/B measuring equipment becomes 0.22.
20. Repeat the cut-off adjustment from steps 10 to 15, and the high light adjustment from steps 16 to 19 several times until all these adjustments are satisfied at the same time.

21. If the value satisfying the specification is obtained, press the MEMORY key and store the 3200°K data in memory.

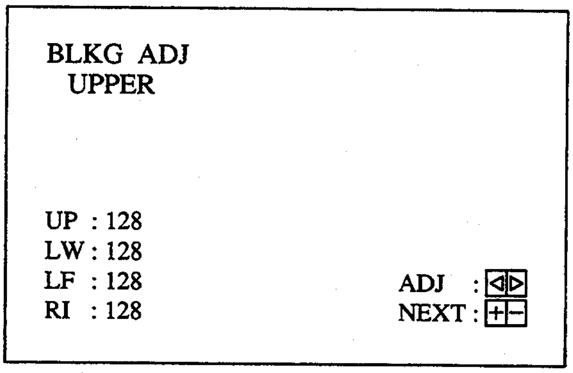
* W/B 3200°K + 8MPCD specifications
Cut-off .... R/G: 2.30 ±0.15
B/G: 0.23 ±0.15
Y : 2.50 ±0.10
High light .... R/G: 2.30 ±0.10
B/G: 0.23 ±0.10

22. Remove sensor from lens.
23. Press the STATUS ON key. Press the PAGE key to show the PAGE3 screen.
24. Select 6500 and press the MEMORY key.

3-6. BLANKING ADJUSTMENT

3-6-1. RGB Blanking Adjustment

1. Press the INPUT-A key to input and show the RGB signal of fH: 15.7 kHz, fV: 60 Hz.
2. Keep pressing the BRIGHT (+) key until level becomes MAX.
3. Press the BLKG key to enter the upper blanking adjustment mode. Confirm that the display shown in Figure 14 appears.



BLKG ADJ
UPPER

UP : 128
LW : 128
LF : 128
RI : 128

ADJ : ◁▷
NEXT : +−

Figure 14

4. Press the TEST key to show the internal cross hatch signal.
5. Use the ▲, ▼ keys of the arrow keys until the upper blanking is positioned 40 m/m out of the effective screen.

* Adjustment specifications of BLANKING.
40 ±10m/m

6. Press the POSITION (+) key to enter the lower blanking adjustment mode.
7. Use the ▼, ▲ keys of the arrow keys until the lower blanking is positioned 40 m/m out of the effective screen.

* Adjustment specifications of BLANKING.
40 ±10m/m

8. Press the POSITION (+) key to enter the left blanking adjustment mode.
9. Use the ◀, ▶ keys of the arrow keys until the left blanking is positioned 40 m/m out of the effective screen.

* Adjustment specifications of BLANKING.
40 ±10m/m

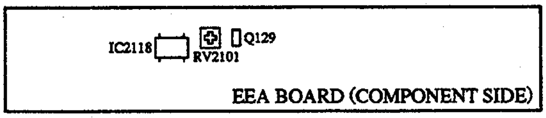
10. Press the POSITION (+) key to enter the right blanking adjustment mode.
11. Use the ▶, ◀ keys of the arrow keys until the right blanking is positioned 40 m/m out of the effective screen.

* Adjustment specifications of BLANKING.
40 ±10m/m

12. Press the MEMORY key to store the blanking data at fH: 15.7 kHz in memory.
13. Switch the RGB input to fH: 31.5 kHz, fH: 35 kHz, fH: 48 kHz, fH: 64 kHz, fH: 76 kHz, fH: 89 kHz, fH: 126 kHz and perform the blanking adjustment in the same way as fH: 15.7 kHz, and store the data in memory.

3-7. HIGH-VOLTAGE PICTURE BENDING ADJUSTMENT

3-7-1. RV2101 Adjustment


IC2118
Q129
RV2101
EEA BOARD (COMPONENT SIDE)

1. Press the INPUT A key to receive and show the RGB stripe signal of fH: 31.5 kHz.
2. Keep pressing the CONTR and BRIGHT (+) keys until their levels become MAX.
3. Adjust RV2101 on the EEA board (grand-son board of E board) until the vertical lines in the right and left become straight.

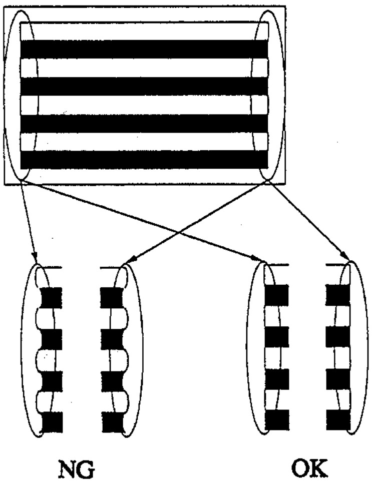


Figure 15

SECTION 4
SAFETY RELATED ADJUSTMENTS

If the following parts which are identified by mark ◪ are replaced, check the HV Regulation circuit, HV Hold Down circuit and IK Protector circuit.

⊠ RV1 [HV Regulation] PA Board
◪ IC1, IC7, IC8, IC9, IC10, IC11, IC12, IC13, R38, R39, R63, R64, R65, R66, R69, R72, R78, R80, R132, X1 .... PA Board
Mounted PA Board, PB Board, HV Block

⊠ RV2 [HV Hold Down] PA Board
◪ IC2, D9, D12, C13, R20, R21, R22, R23, R24, R32, R33, R35, R36, R82 .... PA Board
Mounted PA Board, HV Block

⊠ RV301 [IK Protector] CBR
⊠ RV401 [IK Protector] CBG
⊠ RV501 [IK Protector] CBB
◪ IC303, IC304, D303, R330, R331, R332, R333, R334, R348 .... CBR Board
IC403, IC404, D403, R430, R431, R432, R433, R434, R448 .... CBG Board
IC503, IC504, D503, R530, R531, R532, R533, R534, R548 .... CBB Board
Mounted CBR Board, CBG Board, CBB Board, HV Block

⊠ RV1, RV2 : HV Protector, HV Regulator Check

1. Input the monoscope signal.
2. Keep pressing the CONT (+) key on the control panel until CONT becomes maximum. Keep pressing the BRIGHT (+) key on the control panel until BRIGHT becomes maximum.
3. Adjust RV3 (total ABL) on the PA board until the ABL current becomes 4 mA.

   * Specification of the total ABL current
     4.0 to 4.1 mA

4. Turn RV1 (HV-REG) on the PA board slowly counter-clockwise so that the high voltage becomes 34 kV.

   * Specification of high voltage for HV-PROT adjustment
     34 ± 0.3 kV

5. Turn RV2 (HV-PROT) slowly clockwise and stop turning RV2 when high voltage disappears.
   (The power is turned off a few seconds later.)
6. Turn RV1 clockwise small increment until the power is turned on.
7. Keep pressing the CONT (-) key on the control panel until CONT becomes minimum. Keep pressing the BRIGHT (-) key on the control panel until BRIGHT becomes minimum.

8. Turn RV1 (HV-REG) on the PA board slowly clockwise so that the high voltage becomes 33 kV.

   * High voltage adjustment specification (for cut-off)
     33 ± 0.3 kV

9. Check again that the total ABL current is 4 mA.
   If the total ABL current is other than 4 mA, repeat steps from 2 to 8.
10. Turn off the main power to the projector. Coat entire surface of the anti-rotation caps on top of RV1, RV2 and RV3 with RTV. Then fix them. (See Figure 1.) (Coat the adjustment controls fully with RTV.)

    * RV3 does not have the anti-rotation cap. Coat RV3 fully with RTV until the adjustment point on top of RV3 is covered.

* Coat entire surface of the anti-rotation caps with RTV. (There must be no clearance.)

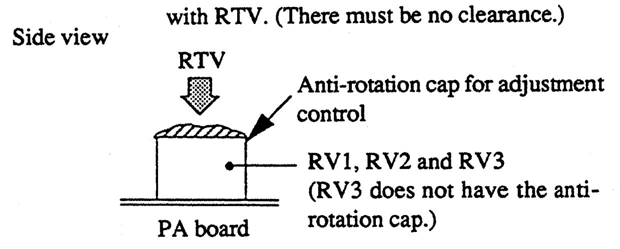

Side view
RTV
Anti-rotation cap for adjustment control
RV1, RV2 and RV3
(RV3 does not have the anti-rotation cap.)
PA board

Figure 1

11. Turn on the main power to the projector. Check that the high voltage stays within the specification.

    * High voltage adjustment specification (for cut-off)
      33 ± 0.3 kV

12. Keep pressing the CONT (+) key on the control panel until CONT becomes maximum. Keep pressing the BRIGHT (+) key on the control panel until BRIGHT becomes maximum.
13. Connect a tool VR (variable resistor) for the HV protector operation check, between TP16 and TP18. (See Figure 2.)

    * Turn the tool VR (variable resistor) for the maximum resistance value before connection.

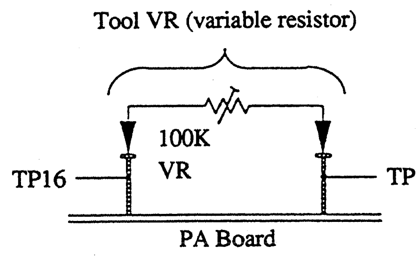
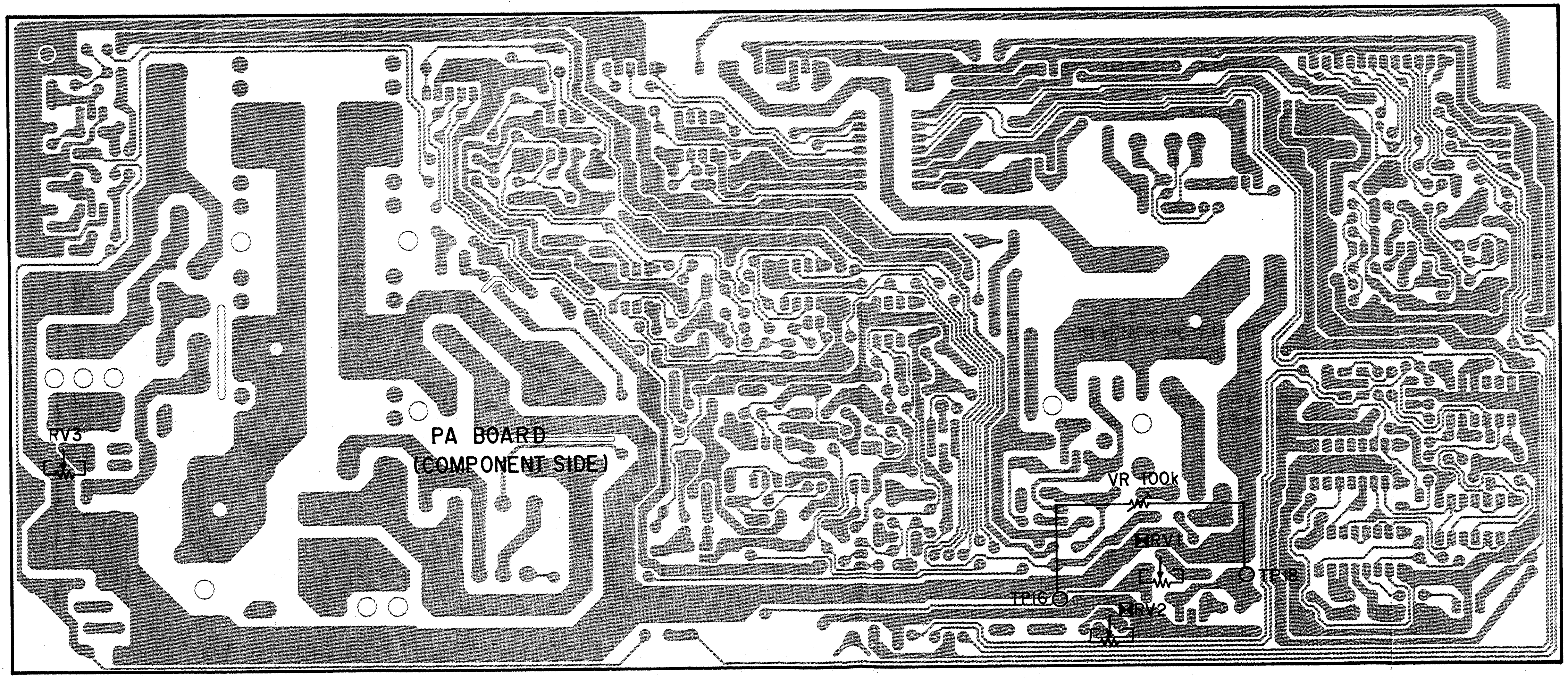


Figure 2



14. Adjust the tool VR (variable resistor) slowly and check to see that the high voltage drops when the high voltage reaches 34 kV.
   - * The main power is turned off a few seconds later.
   - * Specification of high voltage for HV-PROT operation check
     34 ± 0.3 kV
15. Remove the tool VR (variable resistor) and turn on the main power to the projector.
16. Decrease the CONT and BRIGHT to the minimum, then increase the CONT and BRIGHT to the maximum, and check that the high voltage deviation stays within the specification.

   Specification of high voltage deviation
   $33^{+0.2\ \mathrm{kV}}_{-0.5\ \mathrm{kV}}$

   - * If the high voltage deviation is outside the specification range, repeat steps from 2 to 16.
   - * If RV1 and RV2 need to be adjusted, replace the adjustment controls and the anti-rotation caps, then make adjustment.
17. Press the RESET key to return the CONTR and BRIGHT controls to the normal settings.

⧓ RV301, RV401, RV501 : IK Protector Check

1. Check that the main power is turned off.
2. Remove CN522 (3-pin micro-connector) from the EB (RG) board, and turn on the main power.
3. Input and display the all white signal.
4. Press the G and B keys of the CUT OFF key to select red only.
5. While watching the ammeter measuring the ABL current, keep pressing the CONTR (+) key. Confirm that the protector is activated within the specification range of the IK protector current, and also check that the main power is turned off.

   IK protector activation current specification
   2.6 to 3.3 mA
6. Turn on the main power. Press the RESET key to return the CONTR to 80%.
7. Press the R and B keys of the CUT OFF key to select green only.
8. Confirm that the protector is activated within the specification range of the IK protector current, in the same way as step 5.
9. Turn on the main power. Press the RESET key to return the CONTR to 80%.
10. Press the R and G keys of the CUT OFF key to select blue only.
11. Confirm that the protector is activated within the specification range of the IK protector current, in the same way as step 5.
12. Turn off the main power. Connect the 3-pin micro-connector to CN522 of the EB (RG) board. Turn on the main power.
13. Press the RESET key to return the CONTR to 80%.

+B MAX. VOLTAGE CONFIRMATION

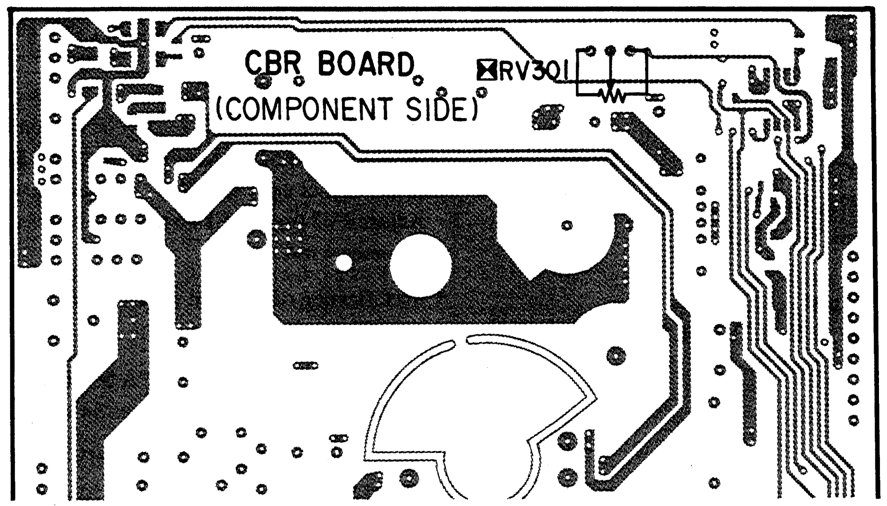
1. Input a monoscope signal.
2. Put R.G.B. cut off switch ON.
3. Input voltage is 130.0 VAC.

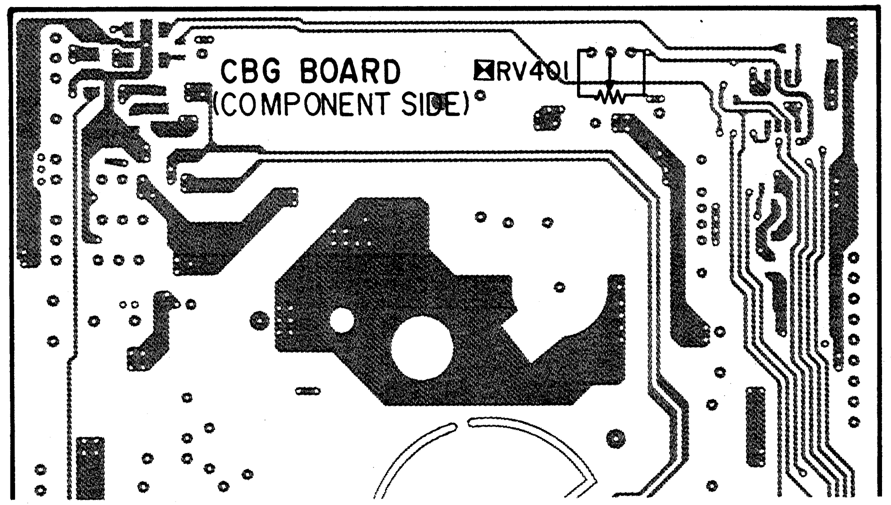
   Note 1: Use NF Power Supply or make sure that distortion factor is 3% or less.
4. Confirm that +B MAX VOLTAGE satisfies the standard.

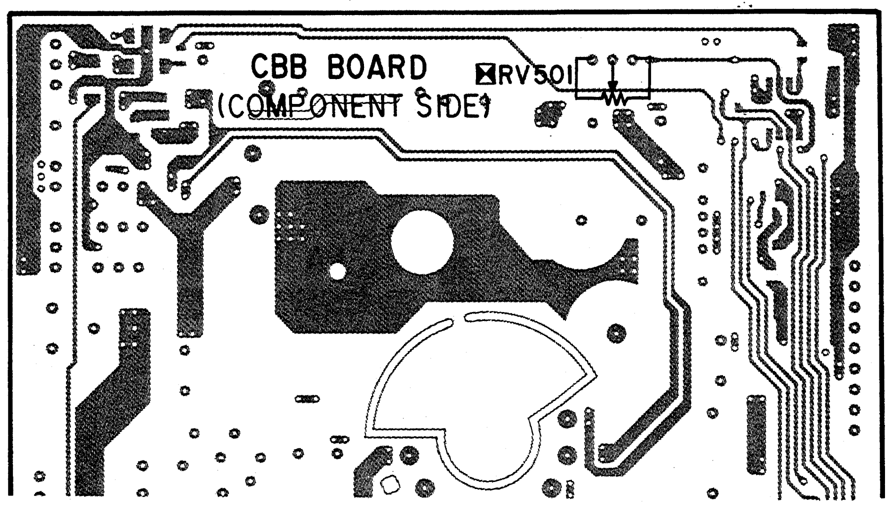
   Standard: 115.0 ± 2.0 VDC

CONFIRMATION WHEN REPLACING POWER SUPPLY BLOCK

Confirm that the voltage of +B Max. voltage is within the standard value when replacing Power Supply Block.

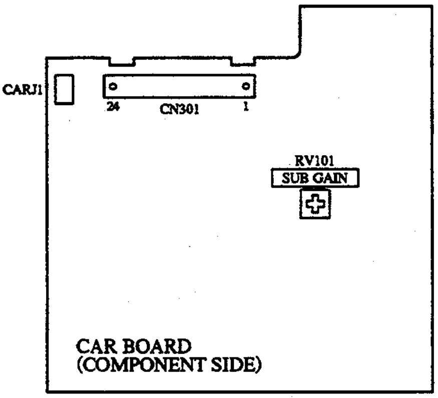


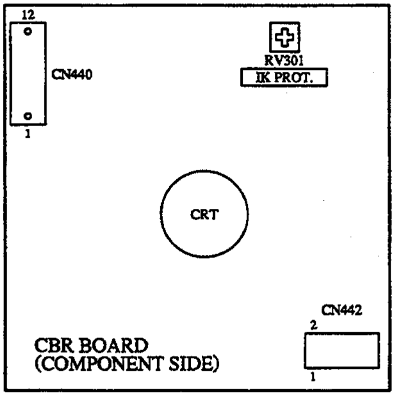


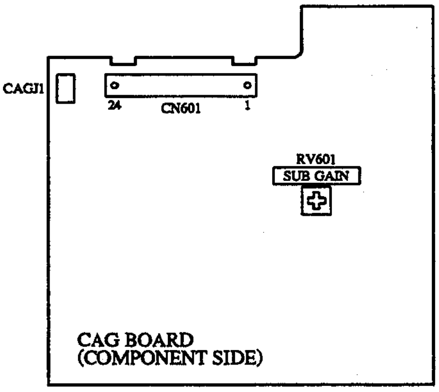


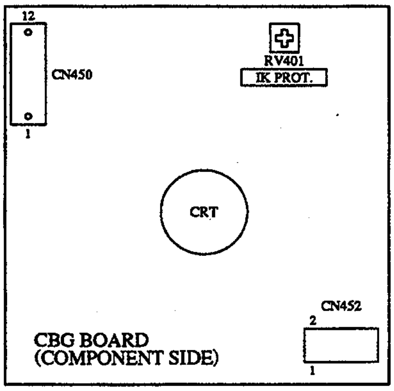
SECTION 5
ELECTRICAL ADJUSTMENT

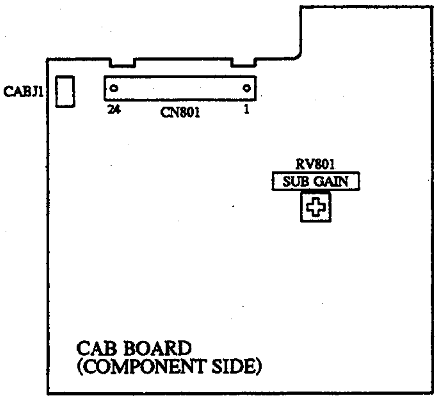
5-1. CAR, CAG, CAB, CBR, CRG AND CBB BOARD ADJUSTMENT

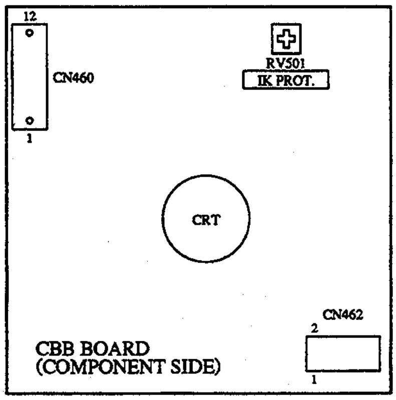

CARJ1
24
CN301
1
RV101
SUB GAIN
CAR BOARD
(COMPONENT SIDE)


12
CN440
1
RV301
IK PROT.
CRT
CN442
2
1
CBR BOARD
(COMPONENT SIDE)


CAGJ1
24
CN601
1
RV601
SUB GAIN
CAG BOARD
(COMPONENT SIDE)


12
CN450
1
RV401
IK PROT.
CRT
CN452
2
1
CBG BOARD
(COMPONENT SIDE)


CABJ1
24
CN801
1
RV801
SUB GAIN
CAB BOARD
(COMPONENT SIDE)


12
CN460
1
RV501
IK PROT.
CRT
CN462
2
1
CBB BOARD
(COMPONENT SIDE)

Introduction

The CAR, CAG, CAB boards and the CBR, CBG, CBB boards have almost identical circuitry respectively. The adjustments for these boards are therefore identical in the [CAR, CBR] block, [CAG, CBG] block and [CAB, CBB] block.

This guide describes how to adjust the [CAG, CBG] block only and the reference numbers for parts and connectors of the remaining blocks are shown in parentheses for the other two blocks respectively. The adjustment procedures for all three blocks are thus shown, as outlined in the example below.

	example
[CAR, CBR] block	(303)
[CAG, CBG] block	CN603
[CAB, CBB] block	<803>

5-1-1. Power Supply Connection

1. Connect the CAG board to the CBG board.
2. Connect the power supply as follows.

CAR board

CN601(301)<801>	10pin	$+12^{+0}_{-0.2}$ V
	11pin	+9 ±0.2V
	12pin	-12 ±0.2V
	8, 9, 13, 14pin	GND

CBR board

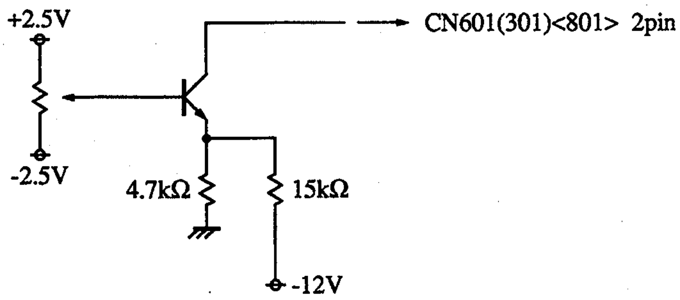
CN450(440)<460>	3pin	+103 ±2V
	8pin	-160 ±5V
	5, 6pin	GND
CN452(442)<462>		GND

3. Connect the control signal to the input as shown below.

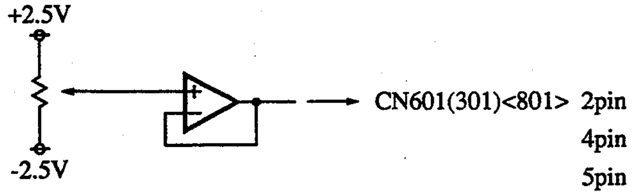
Initial state:
Set the CONTRAST, BRT, DRV, and BKG input controls to 0 V.

CAG board

- CN601(301)<801> 2pin CONTRAST

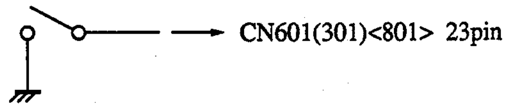

+2.5V
-2.5V
CN601(301)<801> 2pin
4.7kΩ
15kΩ
-12V

- CN601(301)<801> 3pin BRT
  4pin DRV
  5pin BKG

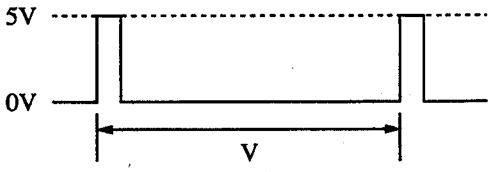

+2.5V
-2.5V
+
CN601(301)<801> 2pin
4pin
5pin

Initial state:
Set the ON/OFF switch to the open position.

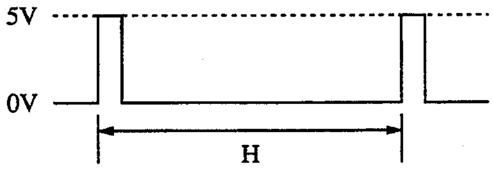
- CN601(301)<801> 23pin ON/OFF


CN601(301)<801> 23pin

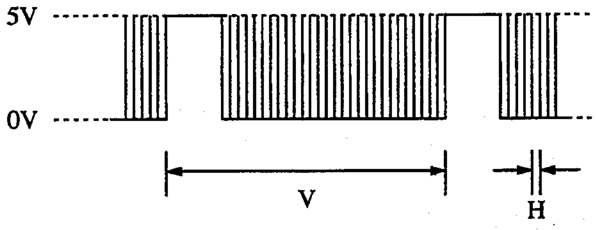
- CN601(301)<801> 15pin BRT. S. P



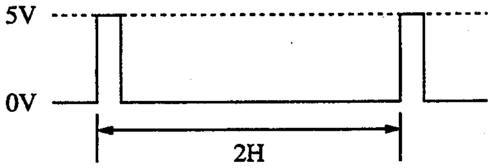
- CN601(301)<801> 16pin BPCP



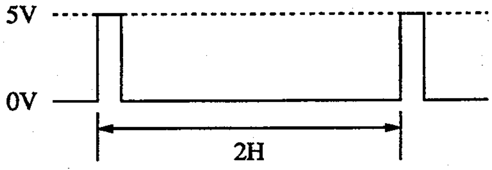
- CN601(301)<801> 17pin SW. P



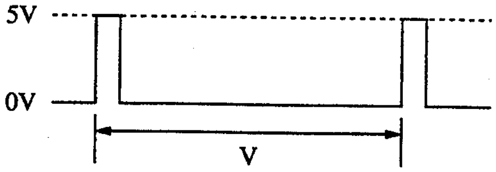
- CN601(301)<801> 18pin CONT. P



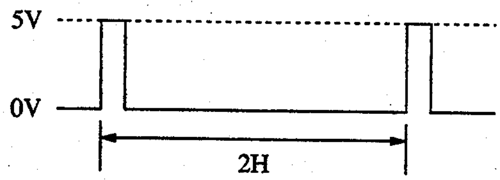
- CN601(301)<801> 19pin CONT. S. P



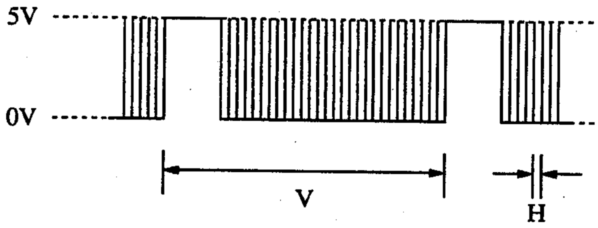
- CN601(301)<801> 20pin BKG. P



- CN601(301)<801> 21pin PED. CL. P

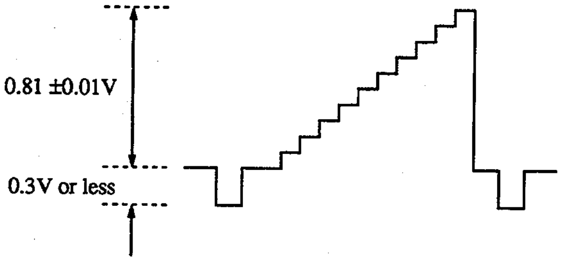


- CN601(301)<801> 23pin BLK



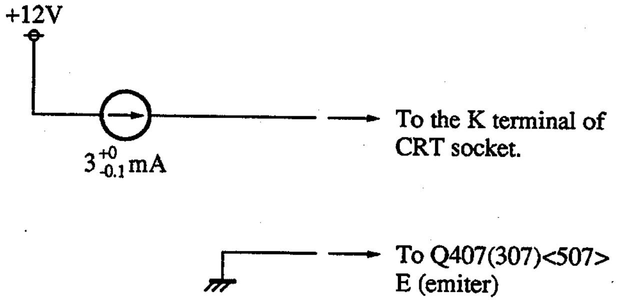
4. Input the video signal to the CAGJ1 (CARJ1) <CABJ1>.

The video 10-step stair step signal (Amplitude) is shown below.



5-1-2. Single Tube Ik PROT Adjustment

1. Supply only +9 V and ±12 V. Disconnect the +103 V and -160 V power supplies.
2. Connect a 3 mA +0 / -0.1 mA current source and GND as shown below.

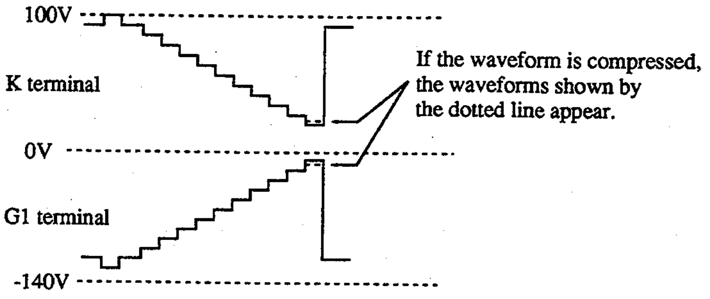

+12V
$3^{+0}_{-0.1}$mA
To the K terminal of CRT socket.
To Q407(307)<507> E (emiter)

3. Adjust RV401 (301) <501> until the Ik DET (CN450 (440) <460> :12 pin) becomes 4.4 V +0.1 / -0 V.
4. Connect the +103 V and -160 V power supplies which were disconnected in step 1.
5. Remove the current source and GND which were connected in step 2.

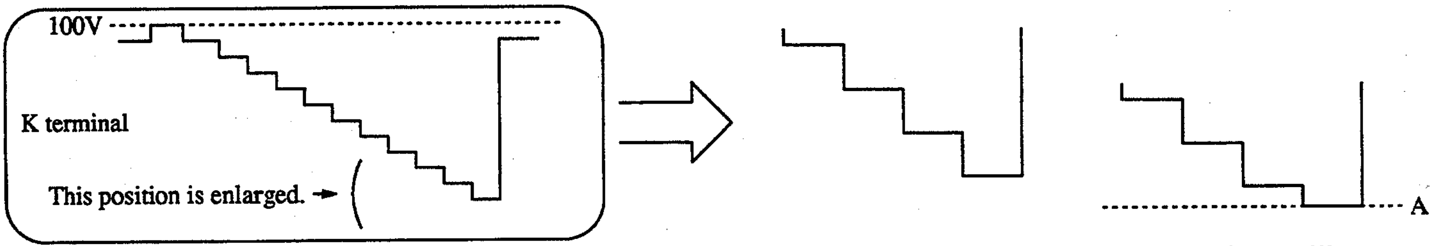
5-1-3. SUB GAIN Adjustment

1. Set the CONTRAST and DRV to the MAX. position.
   * Set the CONTRAST input volume control to -2.5 V.
   Set the DRV input volume control to +2.5 V.
2. Confirm that waveform appears at the K terminal of the CRT socket using an oscilloscope.
3. While confirming the waveform at the K terminal of the CRT socket, adjust RV601 (101) <801> on the CAG board using an oscilloscope so that the waveform is just about to be compressed. (Note: Refer to the next page for details.)
4. Observe the waveform at the G1 terminal of the CRT socket and confirm that the waveform is not compressed. If the waveform is compressed, adjust the RV601 again so that the waveform is not compressed.
5. Return the CONTRAST and DRV controls to their initial settings.

Observe in H rate.



Description on Waveform Compression

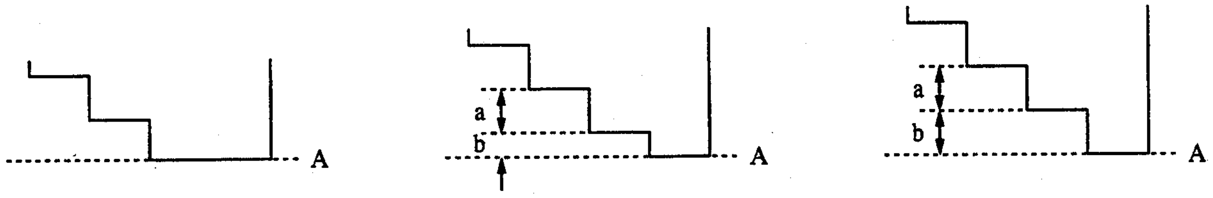


Increase the amplitude from this state using the volume control.

The waveform will not extend any more after it exceeds a certain level.

Turn the volume control to increase the amplitude. If the waveform amplitude exceeds a certain level, it will not increase any more. (Point A in the illustration.) Adjust the volume control so that the tip of the signal reaches this level, and the signal amplitude at each step is the same.

(example)



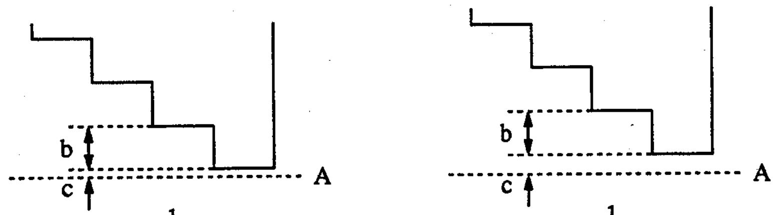
NG

$a > b$

NG

$a = b$

GOOD



$c < \frac{1}{10} b$

GOOD

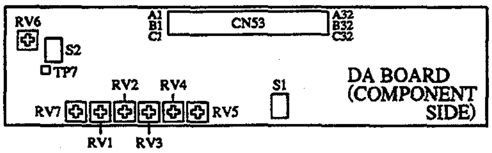
$c \geqq \frac{1}{10} b$

NG

The details of compression of the signal at the G1 terminal are the same except that the waveform polarity is inverted.

(reference: It is easy to check whether a waveform is compressed or not by changing CONTRAST. Don't forget to return CONTRAST to MAX. after checking.)

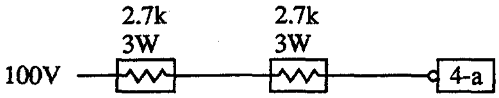
5-2. DA BOARD ADJUSTMENT


RV6
S2
TP7
A1
B1
C1
CN53
A32
B32
C32
RV2
RV4
S1
DA BOARD
(COMPONENT
SIDE)
RV7
RV5
RV1
RV3

S1 : V. SYNC OFF
S2 : HD OFF
RV1 : AFC
RV2 : F-V
RV3 : VIDEO AFC
RV4 : V. HOLD
RV5 : SHIFT
RV6 : FH-LIMIT
RV7 : HI-AFC
TP7 : F-V

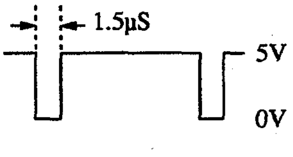
5-2-1. Power Line Connection

① 1-a, b, c : +5.7V
② 2-a, b, c : -5.7V
③ 4-b, c : +15V
④ 5-a, b, c : -15V
⑤ 6-a, b, c
18-a, b, c } : GND
23-a, b, c
⑥ 4-a : +B. JANG

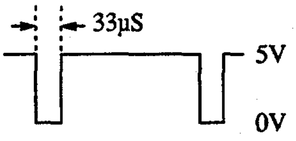

2.7k
3W
2.7k
3W
100V
4-a

5-2-2. Connecting the Signals

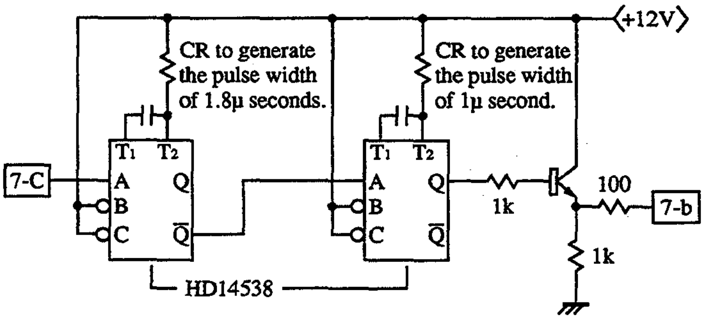
① 8-a: H. SYNC width 1.5 μ seconds
* 5 Vp-p, negative 15 kHz to 135 kHz or 155 kHz



② 9-a: V. SYNC width 33 μ seconds
* 5 Vp-p, negative 38 Hz to 150 Hz variable



③ 7-b: H. D.

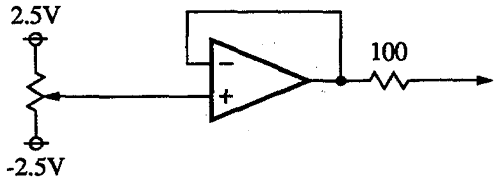

+12V
CR to generate the pulse width of 1.8μ seconds.
CR to generate the pulse width of 1μ second.
T1
T2
A
B
C
Q
Q̄
T1
T2
A
B
C
Q
Q̄
7-C
1k
100
7-b
1k
HD14538

④

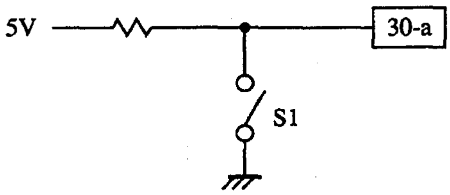
7-a	(SIZE LIMIT)
11-c	(H. SIZE)
26-a	(V. SIZE)
25-b	(BLK-L)
25-c	(BLK-R)
26-b	(BLK-B)
26-c	(BLK-T)
17-b	(H. SHIFT)
27-c	(V. SHIFT)

* These signals are low impedance output with a variable range of ±2.5 V.

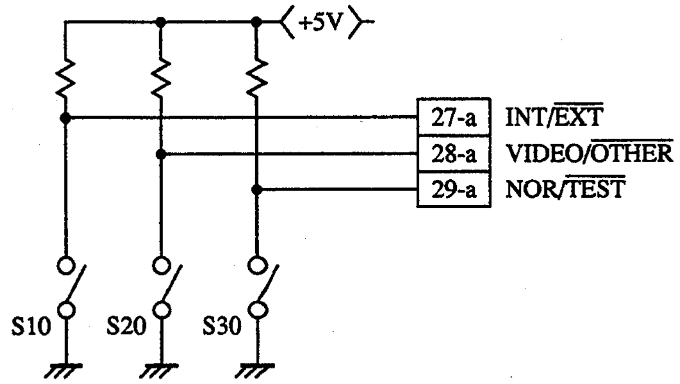
(example)



⑤ DVS/$\overline{\text{NVS}}$ switch

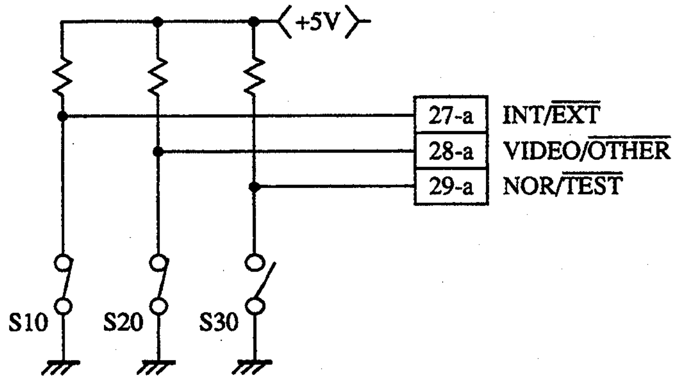


⑥ 27-a
28-a
29-a


+5V
27-a
28-a
29-a
INT/EXT
VIDEO/OTHER
NOR/TEST
S10
S20
S30

5-2-3. RGB AFC Adjustment

1. Set the switches S10 and S20 to ON, and S30 to OFF on the tool.


+5V
27-a
28-a
29-a
INT/EXT
VIDEO/OTHER
NOR/TEST
S10
S20
S30

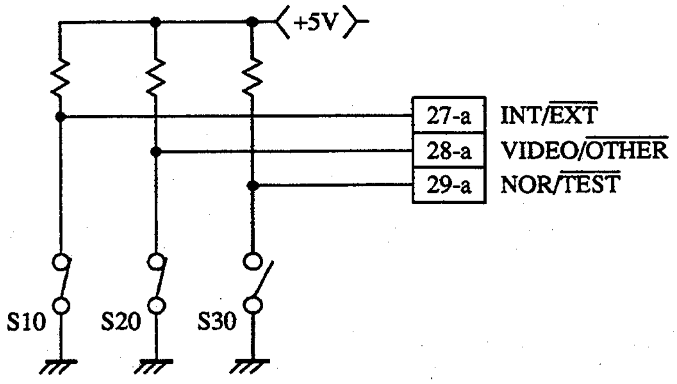
2. Set the H. SYNC to fH = 33.75 kHz.
3. Set the switch S2 on the DA board to OFF. Adjust RV2 until F-V voltage (TP-2) is 2.25 V.

   * Specification: 2.25 ±0.05 V

4. Adjust RV1 until the signal 8-a and the signal 7-b are synchronized.

5-2-4. RGB HI-AFC and FH Limiter Adjustment

1. Set the switches S10 and S20 to ON, and S30 to OFF on the tool.


+5V
27-a
28-a
29-a
INT/EXT
VIDEO/OTHER
NOR/TEST
S10
S20
S30

2. Turn RV6 fully counter-clockwise.
3. Set the H. SYNC to fH = 135.00 kHz.
4. Set the switch S2 on the DA board to ON and adjust RV7 until the signal 8-a and the signal 7-b are synchronized.
5. Set the H. SYNC to fH = 155.00 kHz.
6. Connect the signal 7-b to a frequency counter, and adjust RV6 until its frequency satisfies the specification shown.

   * Specification: 145 ±1 kHz

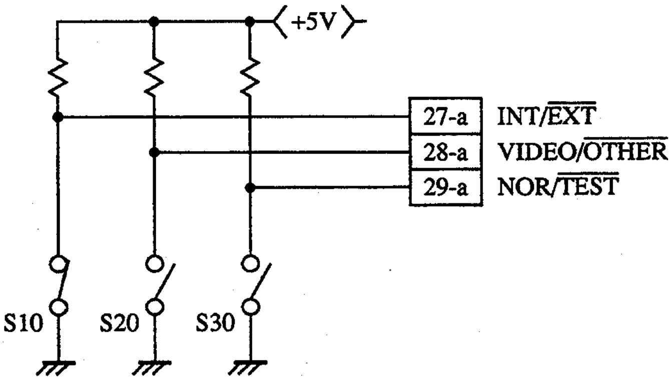
7. Set the switch S2 on the DA board to ON.
8. Sweep the 8-a. H. SYNC signal from 15 kHz to 135 kHz, and confirm that all points are synchronized with the 7-b signal.
   Set the 8-a. H. SYNC signal to 155 kHz.
9. Confirm that the 7-b signal loses synchronization and satisfies the specification shown.

   * Specification: 145 to 150 kHz

10. If step 9 is not satisfied, return to section 5-2-3, step 1.

5-2-5. VIDEO AFC Adjustment

1. Set the switches S10 to ON, and S20 and S30 to OFF on the tool.


+5V
27-a
28-a
29-a
INT/EXT
VIDEO/OTHER
NOR/TEST
S10
S20
S30

2. Set the H. SYNC to fH = 15.734 kHz.
3. Set the switch S2 on the DA board to OFF and adjust RV3 until the signal 8-a and the signal 7-b are synchronized.
4. Set the switch S2 on the DA board to ON and confirm that the signal 8-a H. SYNC and the signal 7-b HD are in phase.
5. If step 4 is not satisfied, return to step 3.

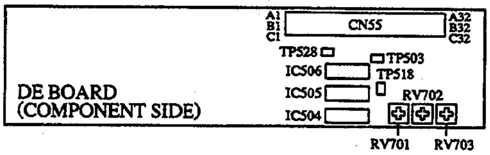
5-2-6. V. HOLD Control Adjustment

1. Set switch S1 on the DA board to OFF.
2. Input the 60 Hz V. SYNC signal to 9-a.
3. Connect a frequency counter to 8-c and adjust RV4 until 36 Hz is displayed.

   * Specification: 36.0 ± 0.5 Hz

4. Set switch S1 on the DA board to ON and confirm that the 8-C signal frequency is equal to the V. SYNC frequency (60 Hz) using a frequency counter.

5-3. DE BOARD ADJUSTMENT


A1
B1
C1
CN55
A32
B32
C32
TP528
TP503
IC506
TP518
IC505
RV702
IC504
DE BOARD
(COMPONENT SIDE)
RV701
RV703

RV701: VS1 BIAS
RV702: VP BIAS
RV703: VS2 BIAS
TP503 : VS1 BIAS
TP518 : VP BIAS
TP528 : VS2 BIAS

5-3-1. Power Line Connection

① 1-a, b : +5.7V
② 2-a, b : -5.7V
③ 1-c : +8V
④ 2-c : -8V
⑤ 3-a, b, c
6-a, b, c
9-a, b, c
18-a, b, c } : GND

5-3-2. Signal Connections

① 19-a, b, c (H. PARA)
20-a, b, c (H. SIN1)
21-a, b, c (H. SIN2)
22-a, b, c (V. PARA)
23-a, b, c (V. SIN1)
24-a, b, c (V. SIN2)
26-a (1/2 H)
32-b (1/2 V)

* Supply all signals from the DA board being used.

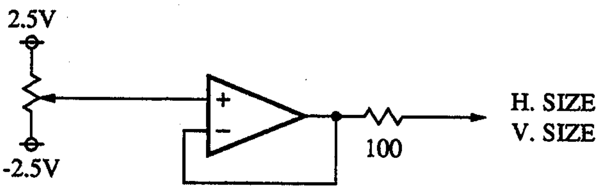
② 31-c (MG. HD)
32-c (MG. VD)

* Supply the HD and VD signals from the DA board which is being used.

③ 4-a, b, c (H. SIZE)
25-a, b, c (V. SIZE)

* These signals must be low impedance output with a variable range of ±2.5 V.

(example)


2.5V
-2.5V
+
−
100
H. SIZE
V. SIZE

④ 28-c ($\overline{A6}$)
30-a (SD)
31-a (LD)
32-a (CLK)

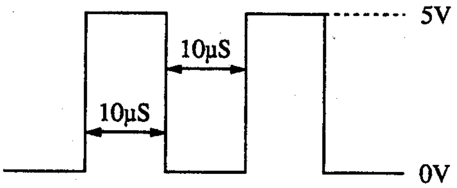
* Supply all signals from the DB board which is being used.

⑤ 27-a (A7)
27-b (A6)
27-c (A5)
28-a (A4)
28-b (A3)

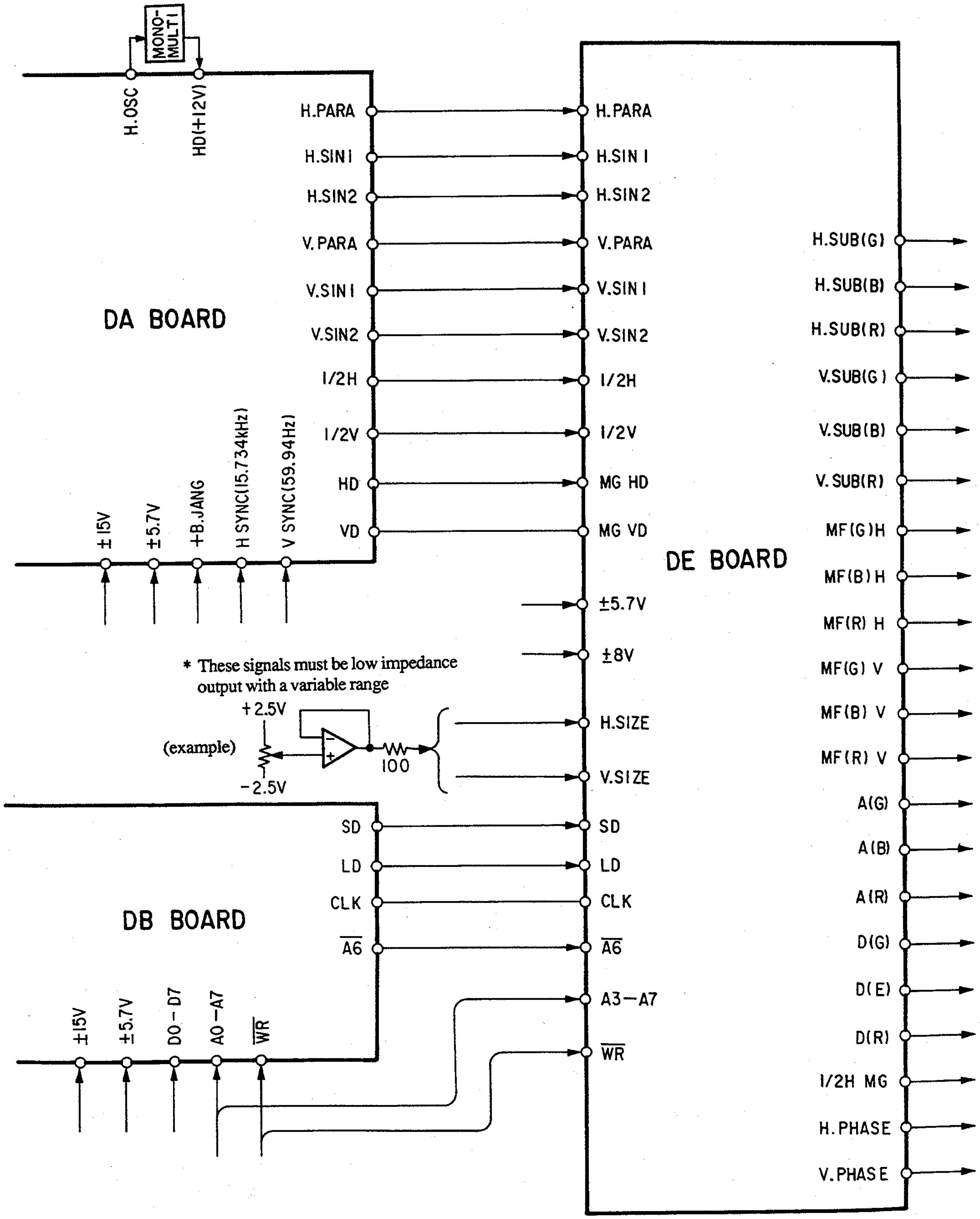
* Supply these signals from the tool which feeds signals to the DB board.

⑥ 26-c ($\overline{WR}$)

* Supply these signals from the tool which feeds signals to the DB board.


5V
10µS
10µS
0V

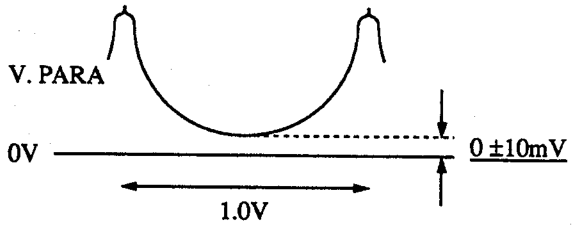
⑦ Tool connection diagram


* These signals must be low impedance output with a variable range

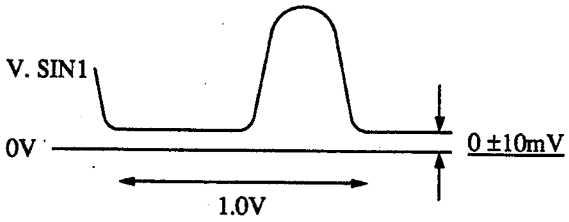
MONO-MULTI
H.OSC
HD(+12V)
DA BOARD
H.PARA
H.SIN1
H.SIN2
V.PARA
V.SIN1
V.SIN2
1/2H
1/2V
HD
VD
±15V
±5.7V
+B.JANG
H SYNC(15.734kHz)
V SYNC(59.94Hz)
+2.5V
(example)
-2.5V
100
DB BOARD
SD
LD
CLK
$\overline{A6}$
±15V
±5.7V
D0 - D7
A0 - A7
$\overline{WR}$
DE BOARD
H.PARA
H.SIN1
H.SIN2
V.PARA
V.SIN1
V.SIN2
1/2H
1/2V
MG HD
MG VD
±5.7V
±8V
H.SIZE
V.SIZE
SD
LD
CLK
$\overline{A6}$
A3-A7
$\overline{WR}$
H.SUB(G)
H.SUB(B)
H.SUB(R)
V.SUB(G)
V.SUB(B)
V.SUB(R)
MF(G)H
MF(B)H
MF(R) H
MF(G) V
MF(B) V
MF(R) V
A(G)
A(B)
A(R)
D(G)
D(E)
D(R)
1/2H MG
H.PHASE
V.PHASE

5-3-3. Offset Adjustment of Standard Waveform of Registration Correction

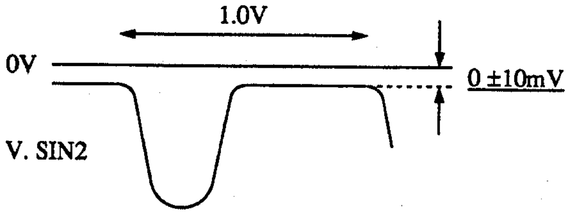
1. V. PARA Offset Adjustment
   Observe 22-a, b, c (TP518) with an oscilloscope and adjust RV702 until the specification shown on the right is satisfied.



2. V. SIN 1 Offset Adjustment
   Observe 23-a, b, c (TP503) with an oscilloscope and adjust RV701 until the specification shown in the right is satisfied.

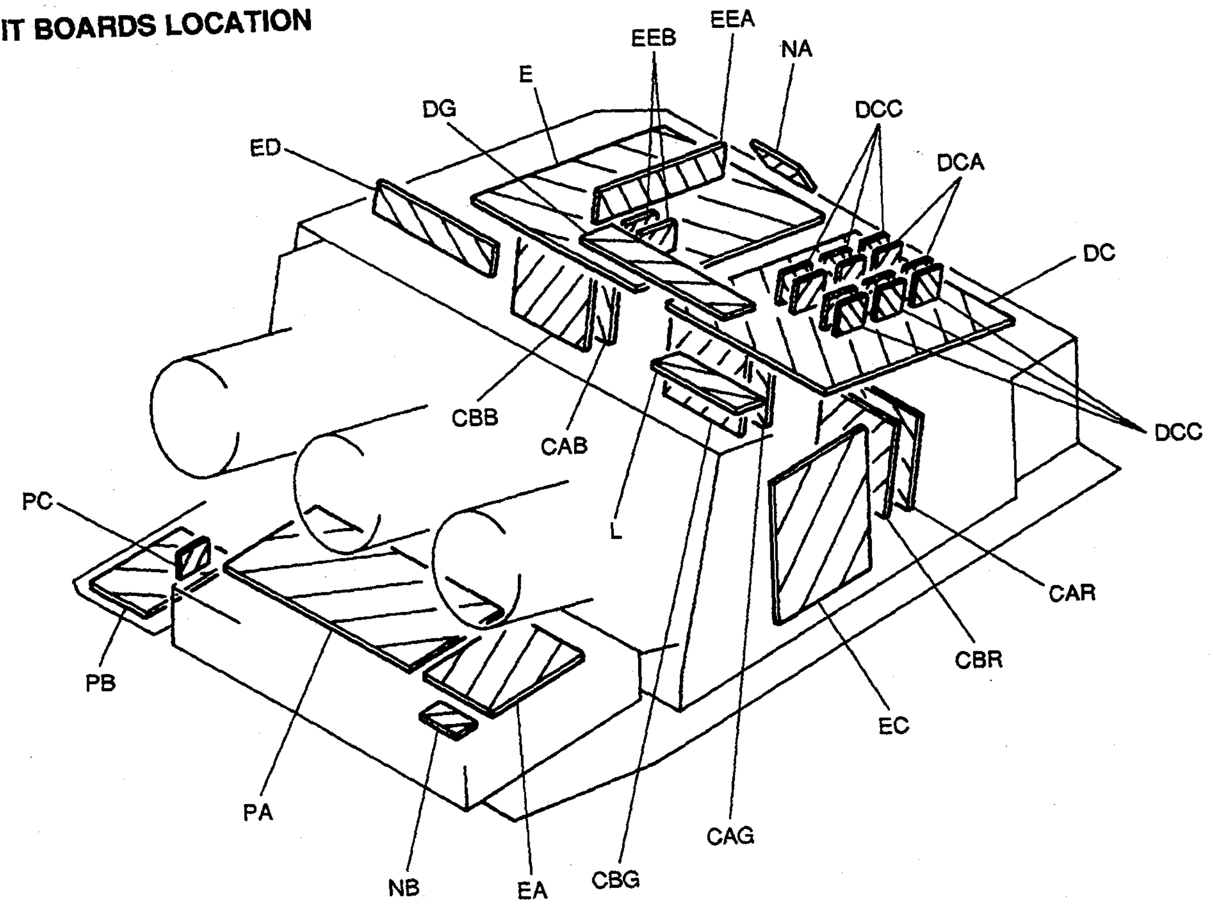


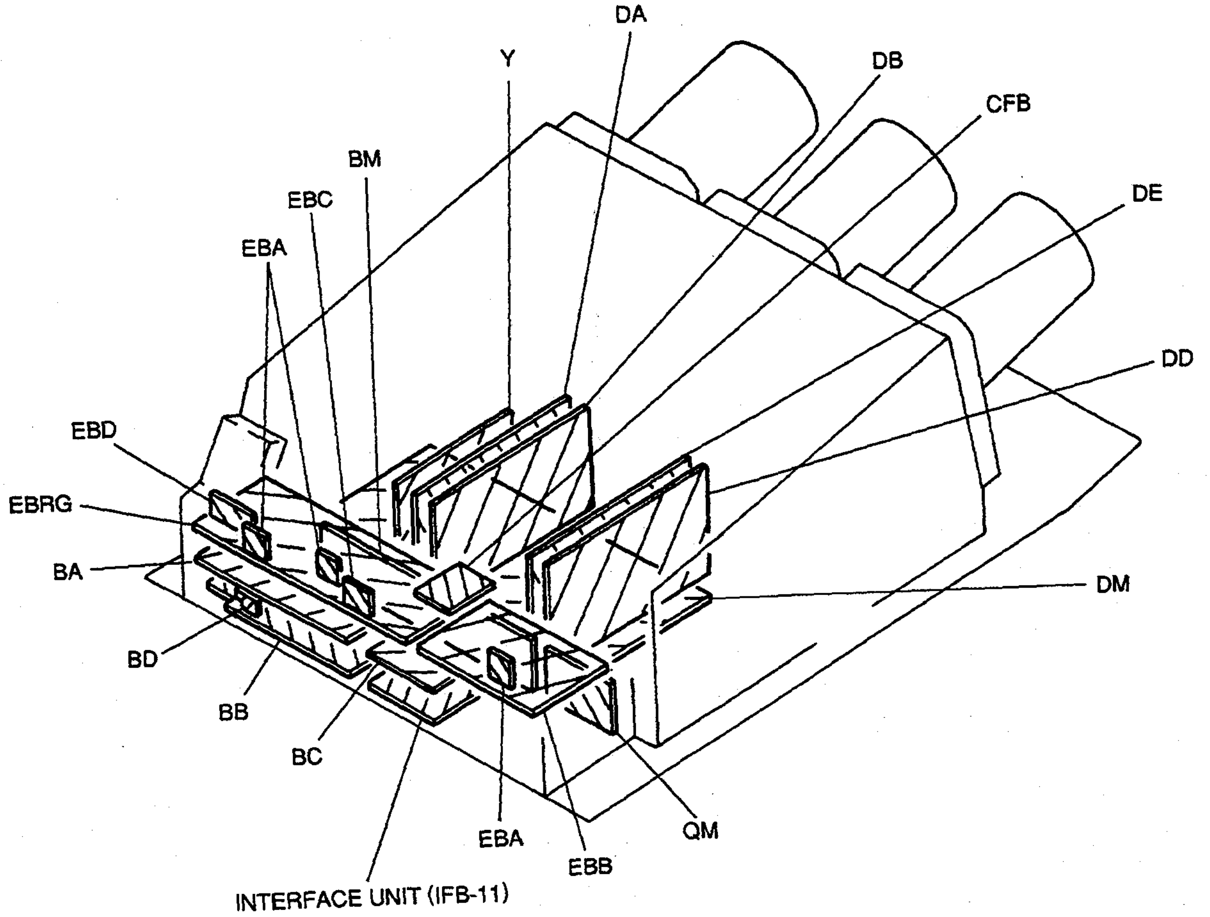
3. V. SIN 2 Offset Adjustment
   Observe 24-a, b, c (TP528) with an oscilloscope and adjust RV703 until the specification shown in the right is satisfied.



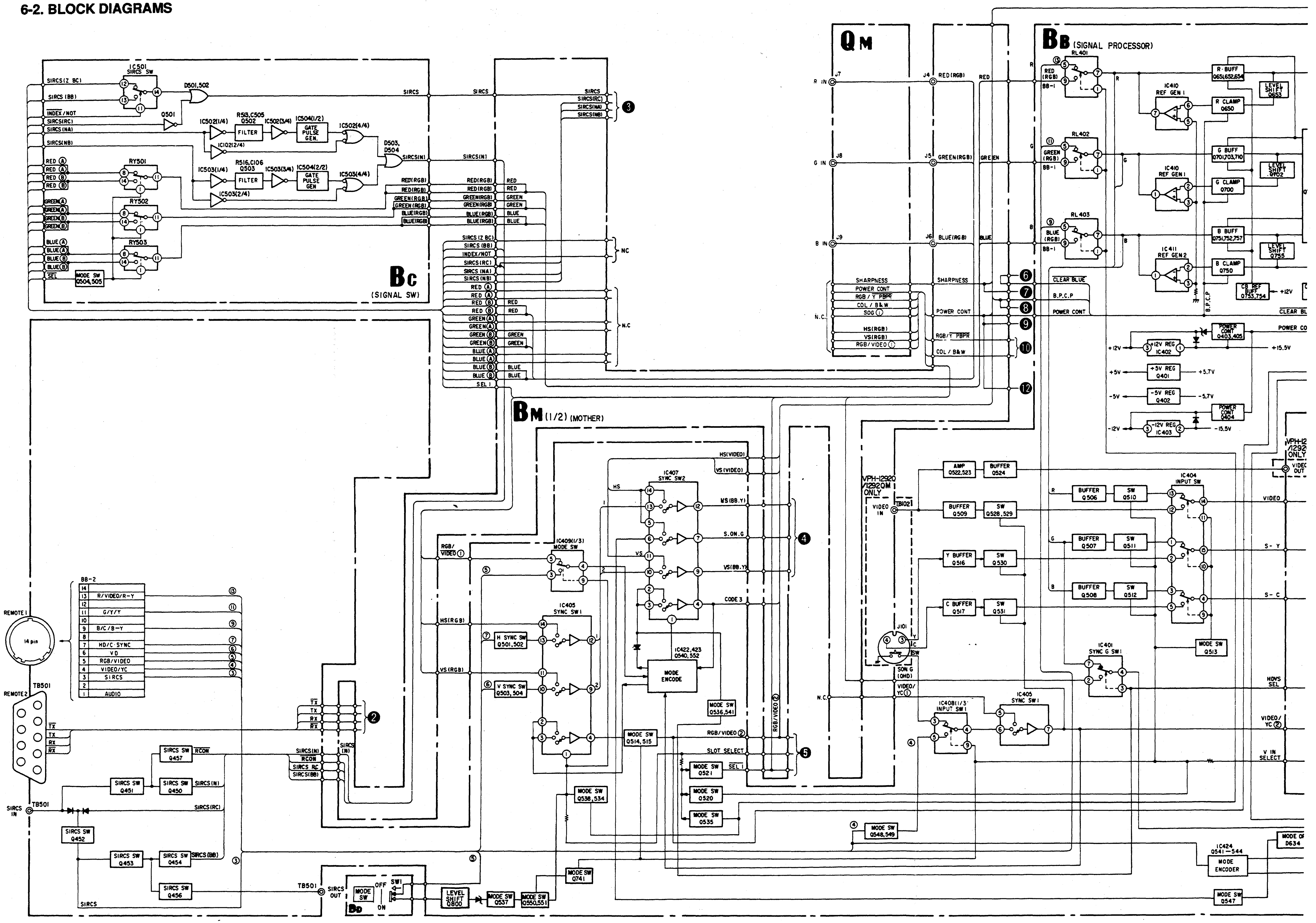
SECTION 6
DIAGRAMS

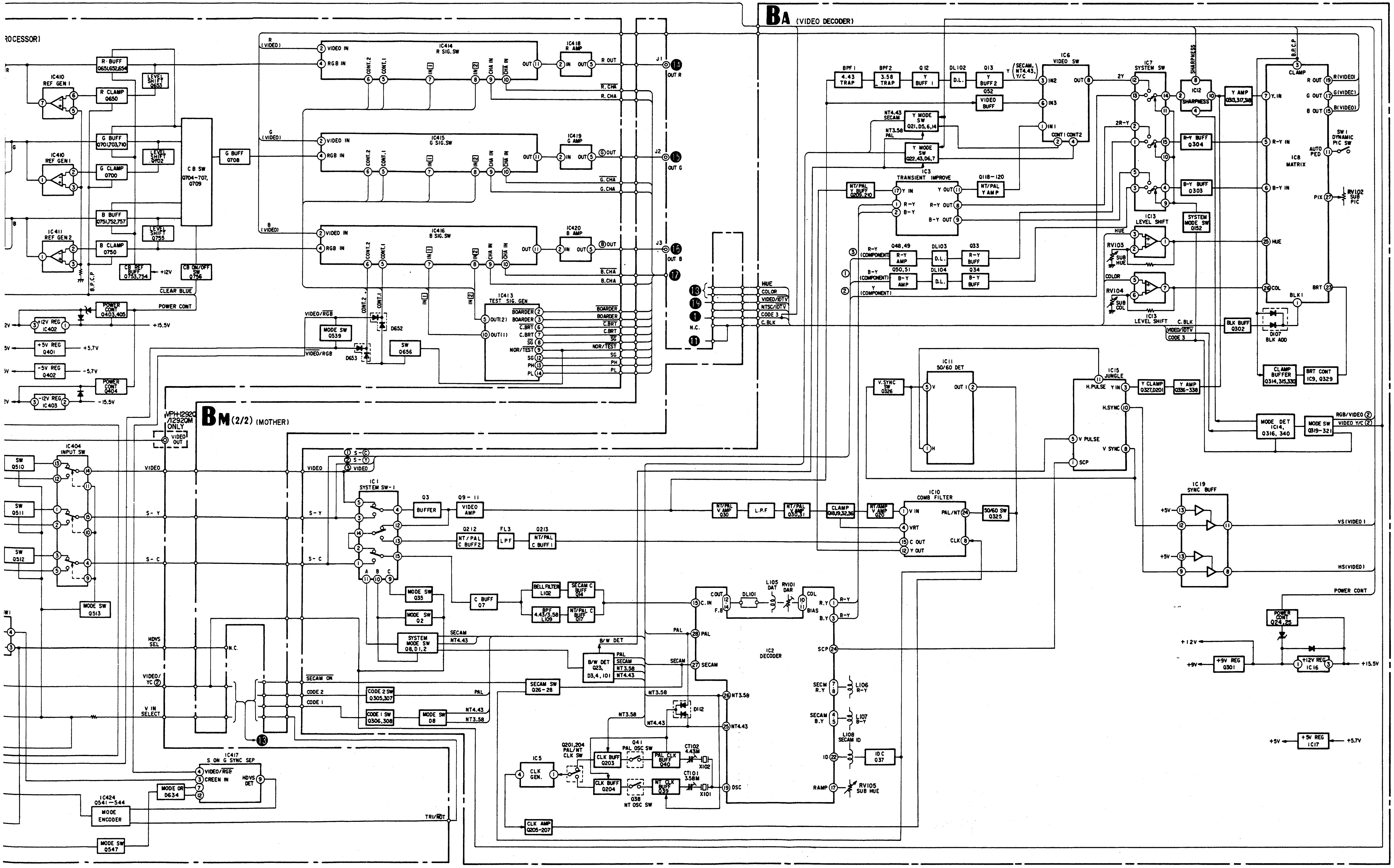
6-1. CIRCUIT BOARDS LOCATION

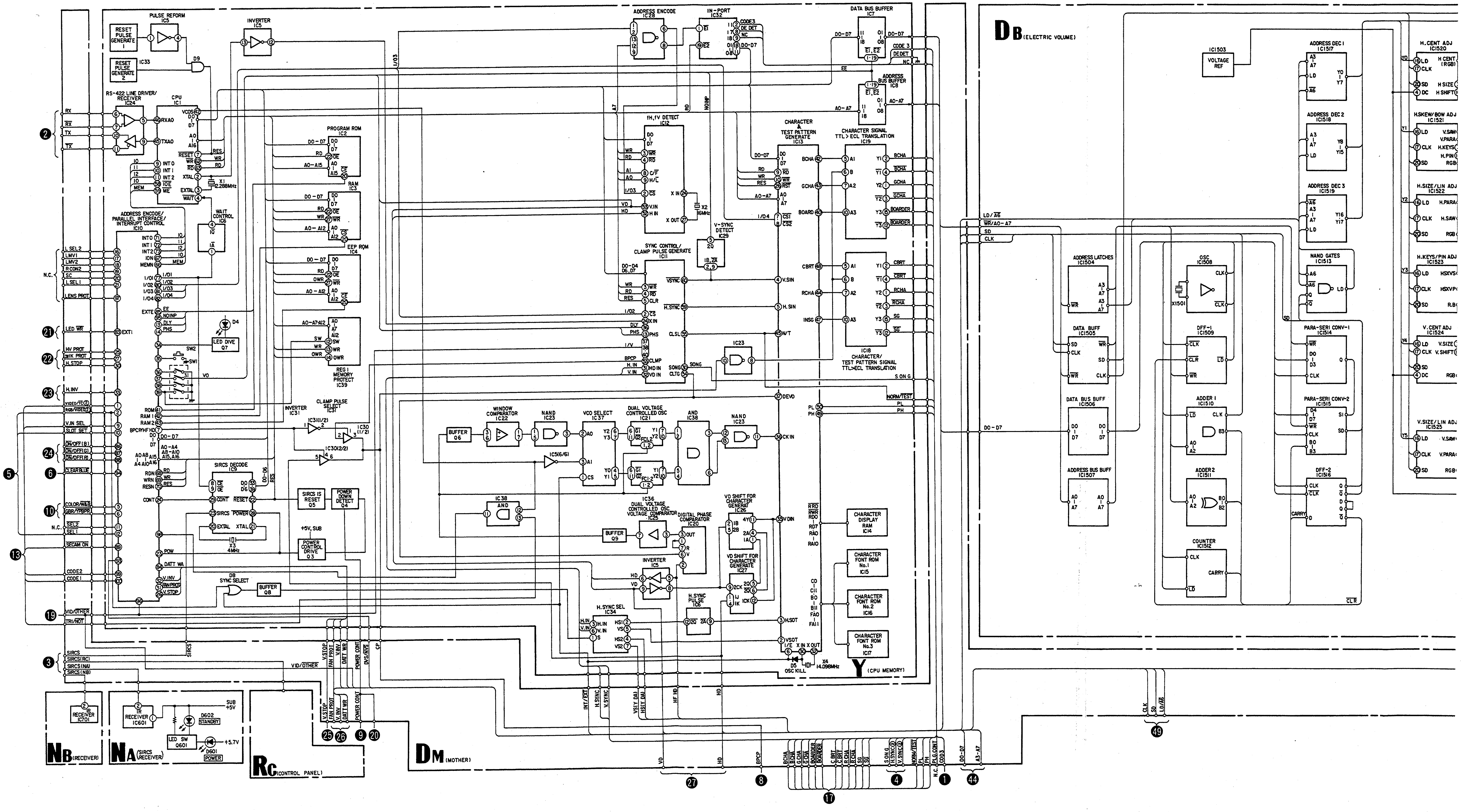

EEA
EEB
NA
E
DCC
DG
DCA
ED
DC
DCC
CBB
CAB
L
PC
CAR
CBR
PB
EC
PA
CAG
NB
EA
CBG

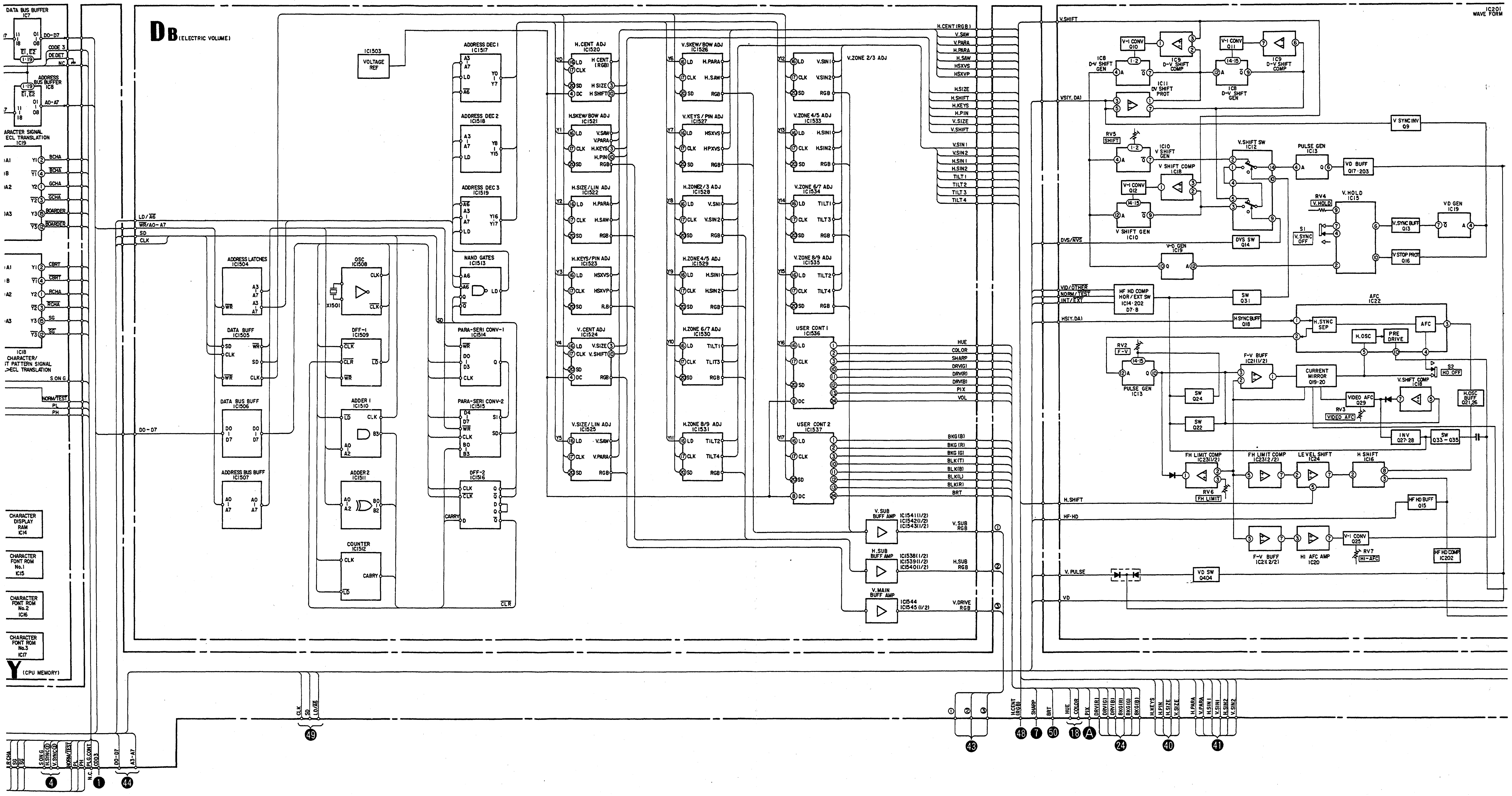

DA
Y
DB
CFB
BM
DE
EBC
EBA
DD
EBD
EBRG
BA
DM
BD
BB
BC
QM
EBA
EBB
INTERFACE UNIT (IFB-11)

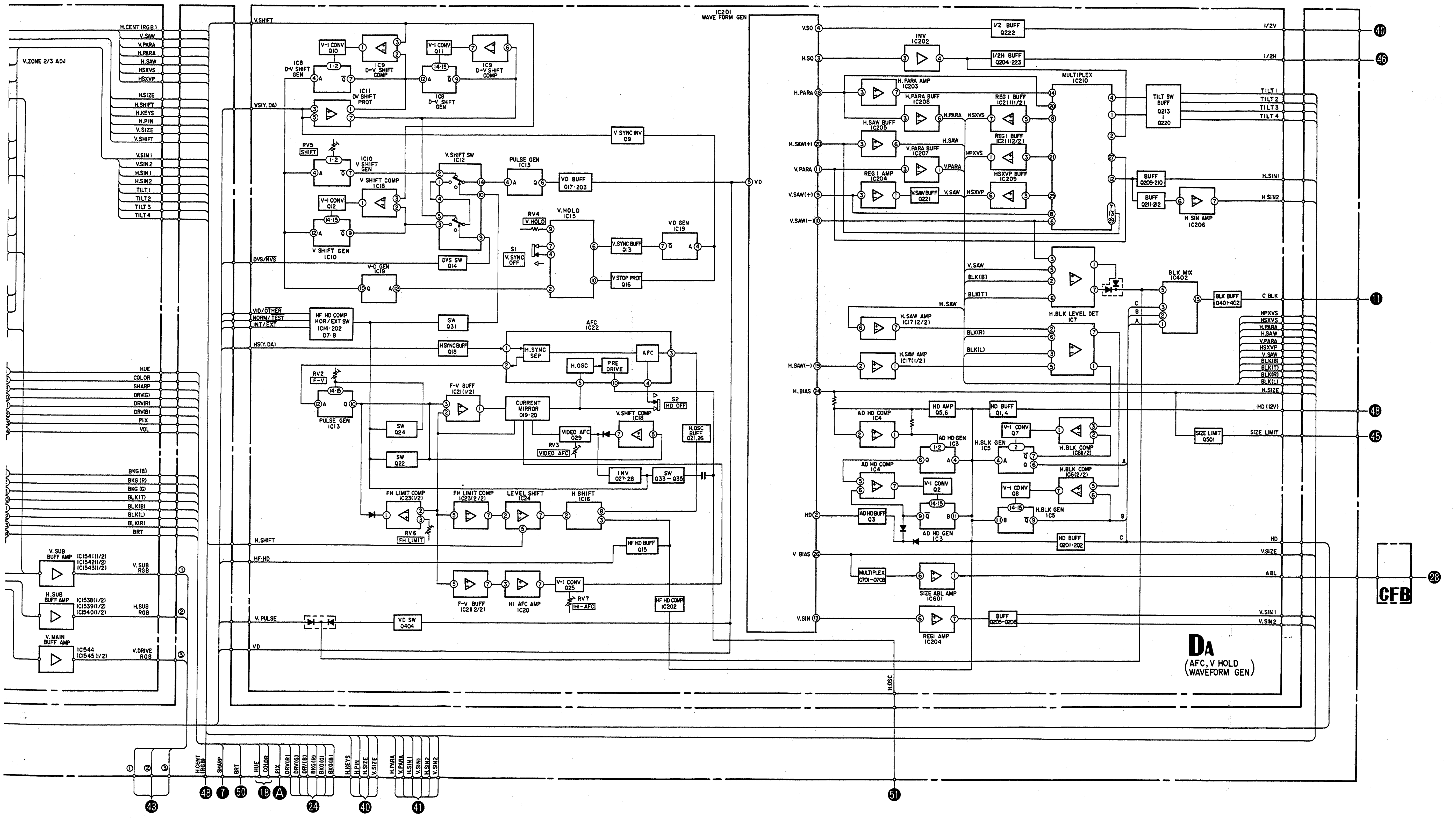
6-2. BLOCK DIAGRAMS

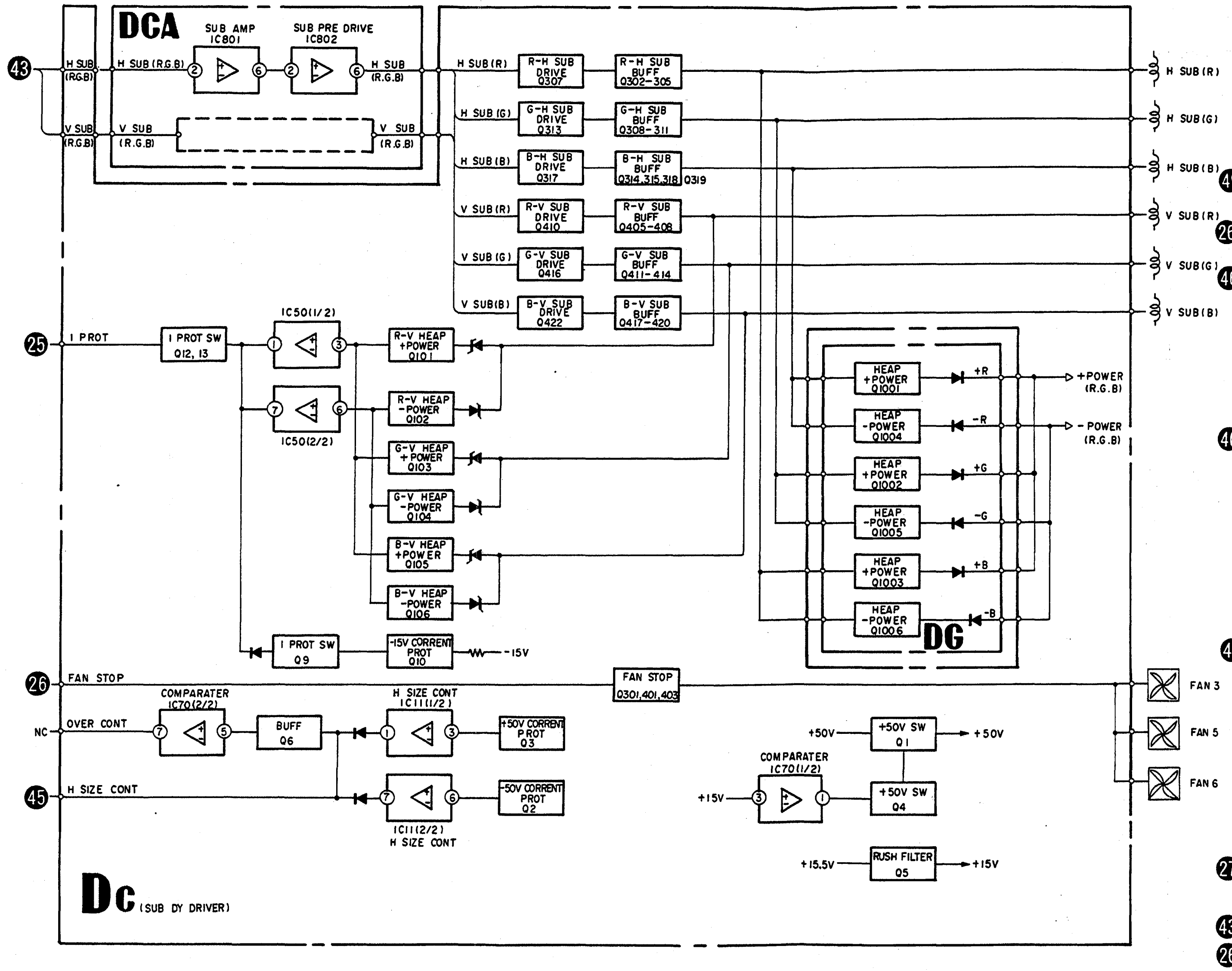

Bc (SIGNAL SW)
IC501 SIRCS SW
D501,502
SIRCS(Z BC)
SIRCS (BB)
INDEX/NOT
SIRCS(RC)
SIRCS(NA)
SIRCS(NB)
Q501
IC502(1/4)
R513,C505 Q502
FILTER
IC502(3/4)
IC504(1/2) GATE PULSE GEN.
IC502(4/4)
IC102(2/4)
D503, D504
SIRCS(N)
RY501
RY502
RY503
R516,C106 Q503
IC503(1/4)
IC503(3/4)
IC504(2/2) GATE PULSE GEN
IC503(4/4)
IC503(2/4)
RED Ⓐ
RED Ⓑ
GREEN Ⓐ
GREEN Ⓑ
BLUE Ⓐ
BLUE Ⓑ
SEL
MODE SW Q504,505
RED(RGB)
GREEN(RGB)
BLUE(RGB)
RED
GREEN
BLUE
SIRCS
SIRCS(RC)
SIRCS(NA)
SIRCS(NB)
③
NC
N.C
SEL 1
QM
R IN J7
G IN J8
B IN J9
J4 RED(RGB)
J5 GREEN(RGB)
J6 BLUE(RGB)
SHARPNESS
POWER CONT
RGB / Y PBPR
COL / B&W
SOG
HS(RGB)
VS(RGB)
RGB/VIDEO
N.C.
⑥
⑦
⑧
⑨
⑩
⑫
BB (SIGNAL PROCESSOR)
RL401
RL402
RL403
RED (RGB)
GREEN (RGB)
BLUE (RGB)
BB-1
IC410 REF GEN 1
IC411 REF GEN 2
R BUFF Q651,652,654
R CLAMP Q650
LEVEL SHIFT Q653
G BUFF Q701,703,710
G CLAMP Q700
LEVEL SHIFT Q702
B BUFF Q751,752,757
B CLAMP Q750
LEVEL SHIFT Q755
CB REF BUFF Q753,754
CLEAR BLUE
B.P.C.P
+12V
CLEAR BL
POWER CONT Q403,405
POWER CO
+12V REG IC402
+15.5V
+5V REG Q401
+5.7V
-5V REG Q402
-5.7V
POWER CONT Q404
-12V REG IC403
-15.5V
BM (1/2) (MOTHER)
HS(VIDEO)
VS(VIDEO)
IC407 SYNC SW2
HS
VS
WS(BB,Y)
S.ON.G
VS(BB,Y)
CODE 3
④
IC409(1/3) MODE SW
RGB/VIDEO①
⑤
IC405 SYNC SW1
HS(RGB)
VS(RGB)
H SYNC SW Q501,502
V SYNC SW Q503,504
IC422,423 Q540,552
MODE ENCODE
MODE SW Q536,541
MODE SW Q514,515
RGB/VIDEO②
SLOT SELECT
SEL 1
MODE SW Q521
MODE SW Q520
MODE SW Q535
MODE SW Q538,534
⑤
VPH-1292Q /1292QM ONLY
VIDEO IN
TB102
J101
SON G (OHD)
VIDEO/YC①
N.C
AMP Q522,523
BUFFER Q524
BUFFER Q509
SW Q528,529
Y BUFFER Q516
SW Q530
C BUFFER Q517
SW Q531
BUFFER Q506
SW Q510
BUFFER Q507
SW Q511
BUFFER Q508
SW Q512
IC404 INPUT SW
VIDEO
S-Y
S-C
MODE SW Q513
VPH-1292 ONLY
VIDEO OUT
IC401 SYNC G SW1
HDVS SEL
IC408(1/3) INPUT SW1
IC405 SYNC SW1
VIDEO/YC②
V IN SELECT
MODE SW Q548,549
IC424 Q541-544
MODE ENCODER
MODE OF D634
MODE SW Q547
REMOTE 1
14pin
BB-2
14
13 R/VIDEO/R-Y
12
11 G/Y/Y
10
9 B/C/B-Y
8
7 HD/C SYNC
6 VD
5 RGB/VIDEO
4 VIDEO/YC
3 SIRCS
2
1 AUDIO
⑬
⑪
⑨
⑦
⑥
⑤
④
③
TB501
REMOTE 2
TX
RX
②
SIRCS SW Q457
RCON
SIRCS SW Q451
SIRCS SW Q450
SIRCS(N)
SIRCS(RC)
SIRCS IN
SIRCS SW Q452
SIRCS SW Q453
SIRCS SW Q454
SIRCS(BB)
SIRCS SW Q456
SIRCS
SIRCS(N)
RCON
SIRCS RC
SIRCS(BB)
TB501
SIRCS OUT
MODE SW
OFF SW1
ON
BD
LEVEL SHIFT Q800
MODE SW Q537
MODE SW Q550,551
MODE SW Q741

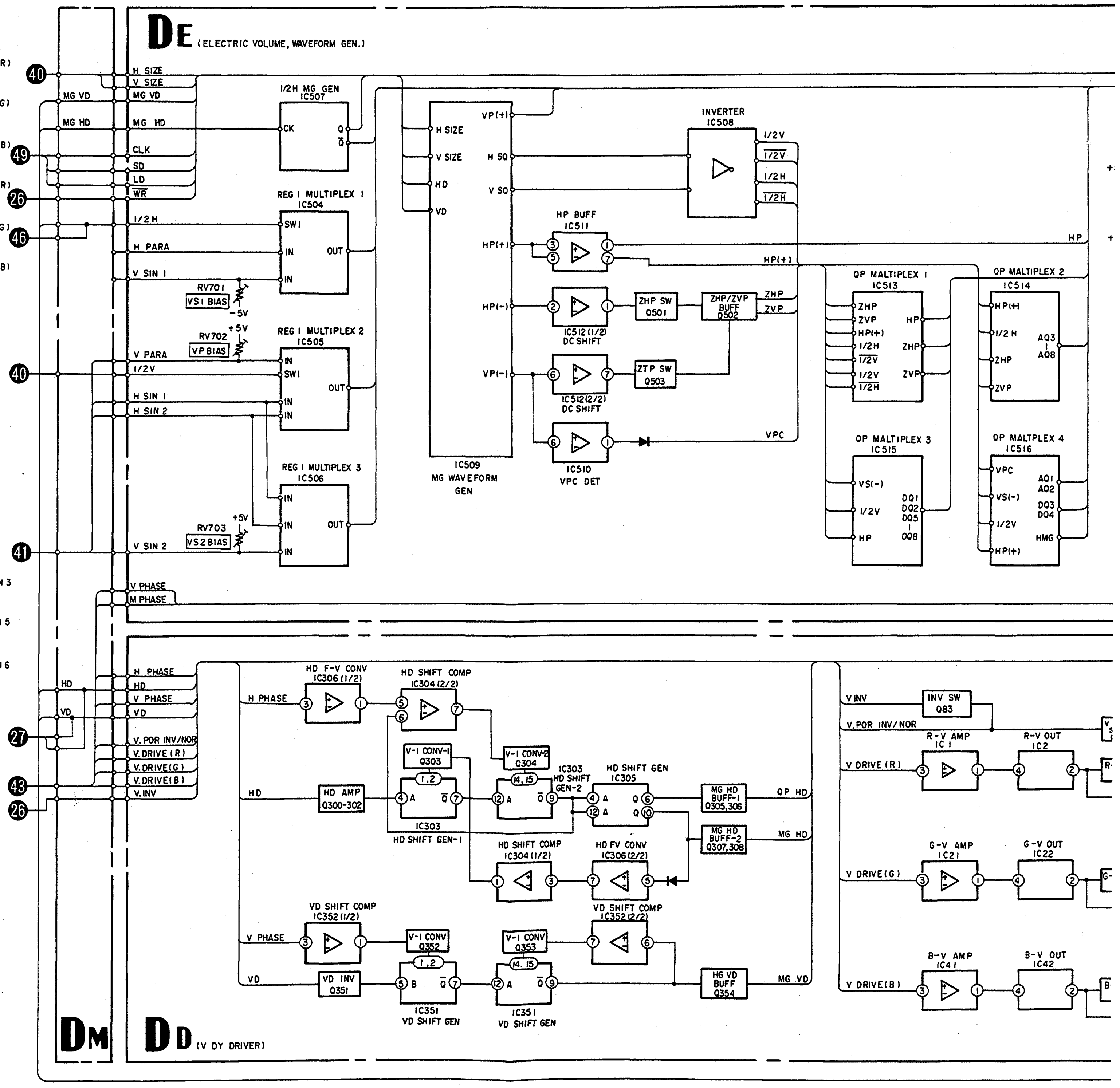

BA (VIDEO DECODER)
BM (2/2) (MOTHER)
VPH-1292Q /1292QM ONLY
IC414 R SIG. SW
IC415 G SIG. SW
IC416 B SIG. SW
IC418 R AMP
IC419 G AMP
IC420 B AMP
IC413 TEST SIG. GEN
IC410 REF GEN I
IC411 REF GEN 2
CB SW Q704-707, Q709
G BUFF Q708
R BUFF Q651,652,654
R CLAMP Q650
G BUFF Q701,703,710
G CLAMP Q700
B BUFF Q751,752,757
B CLAMP Q750
CB REF BUFF Q753,754
CB ON/OFF SW Q756
CLEAR BLUE
POWER CONT
+12V REG IC402
+5V REG Q401
-5V REG Q402
-12V REG IC403
MODE SW Q539
SW Q656
IC6 VIDEO SW
IC7 SYSTEM SW
IC12 SHARPNESS
IC8 MATRIX
Y AMP Q313,317,318
R-Y BUFF Q304
B-Y BUFF Q303
SYSTEM MODE SW Q152
IC13 LEVEL SHIFT
IC3 TRANSIENT IMPROVE
BPF 1 4.43 TRAP
BPF 2 3.58 TRAP
Q12 Y BUFF 1
DL102 D.L.
Q13 Y BUFF 2
Q52 VIDEO BUFF
Y MODE SW Q21,D5,6,14
Y MODE SW Q22,43,D6,7
NT/PAL Y BUFF Q209,210
Q118-120 NT/PAL Y AMP
R-Y AMP Q48,49
B-Y AMP Q50,51
DL103 D.L.
DL104 D.L.
R-Y BUFF Q33
B-Y BUFF Q34
HUE
COLOR
VIDEO/IDTV
NTSC/IDTV
CODE 3
C.BLK
IC11 50/60 DET
V.SYNC SW Q326
IC15 JUNGLE
Y CLAMP Q327,Q201
Y AMP Q336-338
BLK BUFF Q302
D107 BLK ADD
CLAMP BUFFER Q314,315,330
BRT CONT IC9, Q329
MODE DET IC14, Q316, 340
MODE SW Q319-321
SW1 DYNAMIC PIC SW
RV102 SUB PIC
RV103 SUB HUE
RV104 SUB COL
IC19 SYNC BUFF
VS(VIDEO)
HS(VIDEO)
POWER CONT Q24,25
+9V REG Q301
+12V REG IC16
+5V REG IC17
+15.5V
IC404 INPUT SW
SW Q510
SW Q511
SW Q512
MODE SW Q513
IC1 SYSTEM SW-1
Q3 BUFFER
Q9-11 VIDEO AMP
Q212 NT/PAL C BUFF2
FL3 LPF
Q213 NT/PAL C BUFF 1
MODE SW Q35
MODE SW Q2
SYSTEM MODE SW Q8,D1,2
C BUFF Q7
BELL FILTER L102
SECAM C BUFF Q14
BPF 4.43/3.58 L109
NT/PAL C BUFF Q17
NT/PAL V AMP Q30
L.P.F
NT/PAL V AMP Q30,31
CLAMP Q18,19,32,36
NT/AMP V AMP Q20
IC10 COMB FILTER
50/60 SW Q325
IC2 DECODER
B/W DET Q23, D3,4,101
SECAM SW Q26-28
CODE 2 SW Q305,307
CODE 1 SW Q306,308
MODE SW D8
IC5 CLK GEN.
Q201,204 PAL/NT CLK SW
CLK BUFF Q203
CLK BUFF Q204
Q41 PAL OSC SW
Q38 NT OSC SW
PAL CLK BUFF Q40
NT CLK BUFF Q39
CLK AMP Q205-207
ID C Q37
L106 R-Y
L107 B-Y
L108 SECAM ID
RV105 SUB HUE
RV101 DAR
L105 DAT
IC417 S ON G SYNC SEP
IC424 Q541-544 MODE ENCODER
MODE SW Q547
MODE OR D634
HDVS SEL
V IN SELECT
TRI/ROT

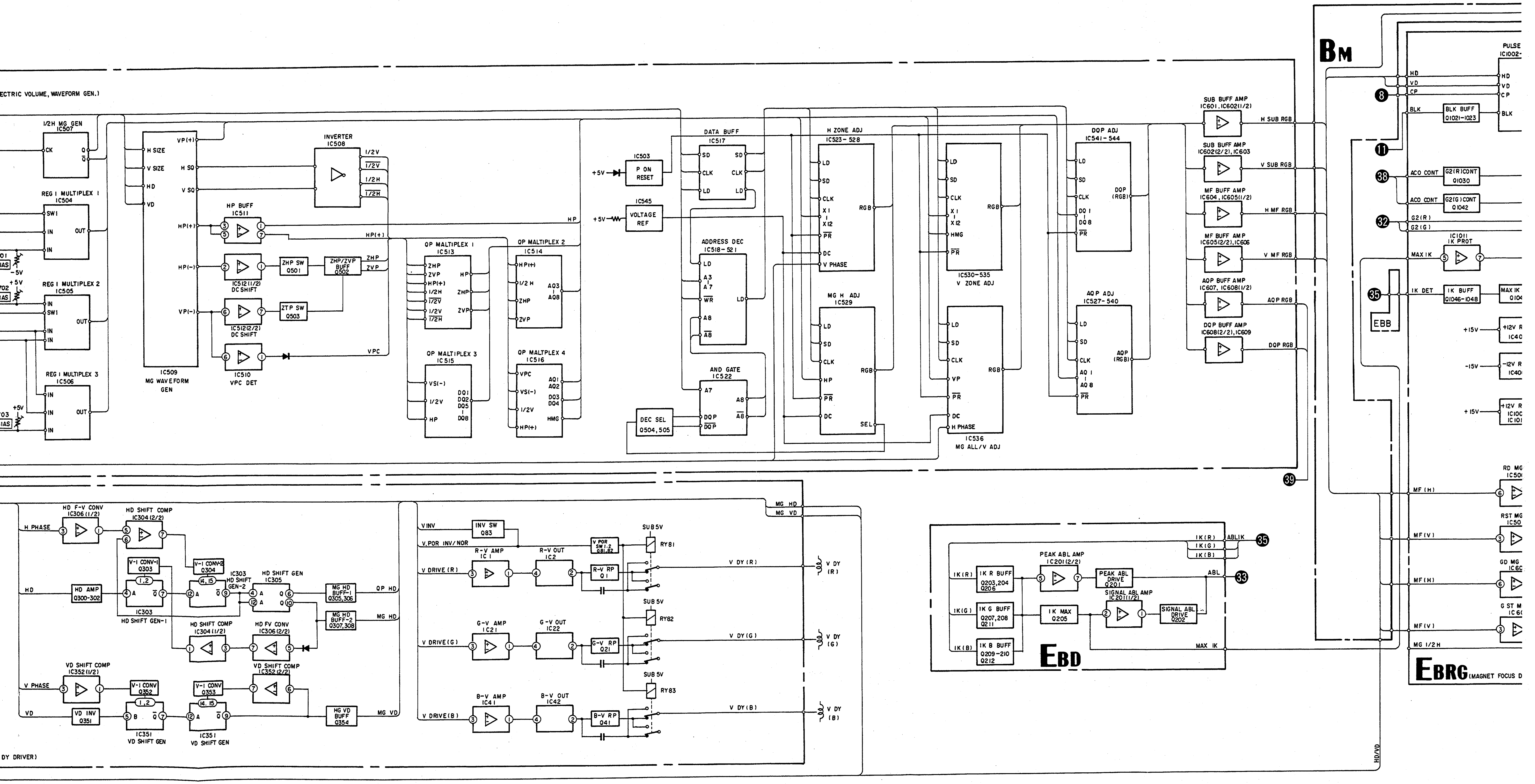

DM (MOTHER)
DB (ELECTRIC VOLUME)
NB (RECEIVER)
NA (SIRCS RECEIVER)
RC (CONTROL PANEL)
Y (CPU MEMORY)
PULSE REFORM IC5
RESET PULSE GENERATE 1
RESET PULSE GENERATE 2
IC33
INVERTER IC5
RS-422 LINE DRIVER/RECEIVER IC24
CPU IC1
PROGRAM ROM IC2
RAM IC3
EEP ROM IC4
REG 1 MEMORY PROTECT IC39
ADDRESS ENCODE/PARALLEL INTERFACE/INTERRUPT CONTROL IC10
WAIT CONTROL IC6
LED DIVE Q7
D4
SW2
SW1
X1 12.288MHz
ADDRESS ENCODE IC28
IN-PORT IC32
DATA BUS BUFFER IC7
ADDRESS BUS BUFFER IC8
fH, fV DETECT IC12
X2 16MHz
V-SYNC DETECT IC29
SYNC CONTROL/CLAMP PULSE GENERATE IC11
CHARACTER & TEST PATTERN GENERATE IC13
CHARACTER SIGNAL TTL > ECL TRANSLATION IC19
IC18 CHARACTER/TEST PATTERN SIGNAL TTL>ECL TRANSLATION
IC23
INVERTER IC31
CLAMP PULSE SELECT IC31
IC31(1/2)
IC30(1/2)
IC30(2/2)
BUFFER Q6
WINDOW COMPARATOR IC22
NAND IC23
VCO SELECT IC37
DUAL VOLTAGE CONTROLLED OSC IC21
AND IC38
NAND IC23
IC5(6/6)
SIRCS DECODE IC9
SIRCS IS RESET Q5
POWER DOWN DETECT Q4
X3 4MHz
+5V, SUB
POWER CONTROL DRIVE Q3
IC38 AND
IC36 DUAL VOLTAGE CONTROLLED OSC VOLTAGE COMPARATOR IC25
DIGITAL PHASE COMPARATOR IC20
BUFFER Q9
INVERTER IC5
D8 SYNC SELECT
BUFFER Q8
H.SYNC SEL IC34
H.SYNC PULSE IC6
VD SHIFT FOR CHARACTER GENERATE IC26
VD SHIFT FOR CHARACTER GENERATE IC27
CHARACTER DISPLAY RAM IC14
CHARACTER FONT ROM No.1 IC15
CHARACTER FONT ROM No.2 IC16
CHARACTER FONT ROM No.3 IC17
X4 14.096MHz
D5 OSC KILL
RECEIVER IC701
IR RECEIVER IC601
D602 STANDBY
LED SW Q601
D601 POWER
SUB +5V
+5.7V
IC1503 VOLTAGE REF
ADDRESS DEC 1 IC1517
ADDRESS DEC 2 IC1518
ADDRESS DEC 3 IC1519
NAND GATES IC1513
ADDRESS LATCHES IC1504
OSC IC1508
X1501
DATA BUFF IC1505
DFF-1 IC1509
DATA BUS BUFF IC1506
ADDER 1 IC1510
ADDRESS BUS BUFF IC1507
ADDER 2 IC1511
COUNTER IC1512
PARA-SERI CONV-1 IC1514
PARA-SERI CONV-2 IC1515
DFF-2 IC1516
H.CENT ADJ IC1520
H.SKEW/BOW ADJ IC1521
H.SIZE/LIN ADJ IC1522
H.KEYS/PIN ADJ IC1523
V.CENT ADJ IC1524
V.SIZE/LIN ADJ IC1525
RX
TX
L.SEL2
LMV1
LMV2
R.CON2
SC
L.SEL1
LENS PROT
LED WR
HV PROT
IK PROT
H.STOP
H.INV
VIDEO/Y/C
RGB/VIDEO
V.IN SEL
SLOT SET
ON/OFF(B)
ON/OFF(G)
ON/OFF(R)
CLEAR BLUE
COLOR/W&B
GBR/YPBPR
SEL2
SEL1
SECAM ON
CODE2
CODE1
VID/OTHER
TRI/NOT
SIRCS
SIRCS(RC)
SIRCS(NA)
SIRCS(NB)
N.C.
V.STOP
FAN PROT
V.INV
DATT WR
POWER CONT
VD
HD
BPCP
BCHA
RCHA
GCHA
BOARDER
INSG
CBRT
S.SYNC
V.SYNC
NORM/TEST
PL
PH
PLG.CONT
CODE3
D0-D7
A0-A7
LD/A6
WR/A0-A7
SD
CLK
①
②
③
④
⑤
⑥
⑧
⑨
⑩
⑬
⑰
⑲
⑳
㉑
㉒
㉓
㉔
㉕
㉖
㉗
㊹
㊾

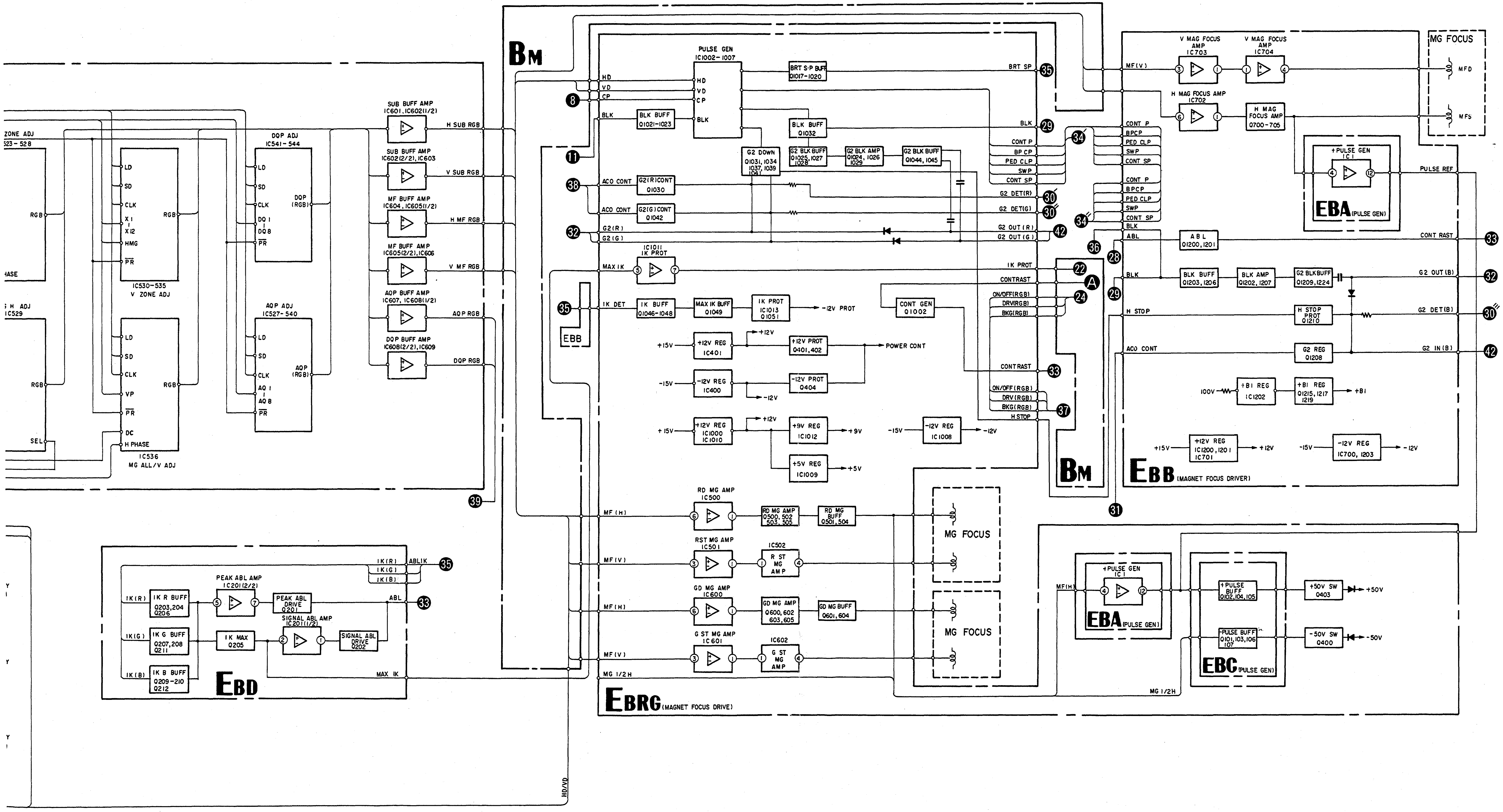

DB (ELECTRIC VOLUME)
Y (CPU MEMORY)
DATA BUS BUFFER IC7
ADDRESS BUS BUFFER IC8
CHARACTER SIGNAL ECL TRANSLATION IC19
IC18 CHARACTER/ST PATTERN SIGNAL >ECL TRANSLATION
CHARACTER DISPLAY RAM IC14
CHARACTER FONT ROM No.1 IC15
CHARACTER FONT ROM No.2 IC16
CHARACTER FONT ROM No.3 IC17
IC1503 VOLTAGE REF
ADDRESS LATCHES IC1504
DATA BUFF IC1505
DATA BUS BUFF IC1506
ADDRESS BUS BUFF IC1507
OSC IC1508
X1501
DFF-1 IC1509
ADDER 1 IC1510
ADDER 2 IC1511
COUNTER IC1512
ADDRESS DEC 1 IC1517
ADDRESS DEC 2 IC1518
ADDRESS DEC 3 IC1519
NAND GATES IC1513
PARA-SERI CONV-1 IC1514
PARA-SERI CONV-2 IC1515
DFF-2 IC1516
H.CENT ADJ IC1520
H.SKEW/BOW ADJ IC1521
H.SIZE/LIN ADJ IC1522
H.KEYS/PIN ADJ IC1523
V.CENT ADJ IC1524
V.SIZE/LIN ADJ IC1525
V.SKEW/BOW ADJ IC1526
V.KEYS/PIN ADJ IC1527
H.ZONE2/3 ADJ IC1528
H.ZONE4/5 ADJ IC1529
H.ZONE 6/7 ADJ IC1530
H.ZONE 8/9 ADJ IC1531
V.ZONE 2/3 ADJ
V.ZONE 4/5 ADJ IC1533
V.ZONE 6/7 ADJ IC1534
V.ZONE 8/9 ADJ IC1535
USER CONT 1 IC1536
USER CONT 2 IC1537
V.SUB BUFF AMP IC1541(1/2) IC1542(1/2) IC1543(1/2)
H.SUB BUFF AMP IC1538(1/2) IC1539(1/2) IC1540(1/2)
V.MAIN BUFF AMP IC1544 IC1545(1/2)
H.CENT(RGB)
V.SAW
V.PARA
H.PARA
H.SAW
HSXVS
HSXVP
H.SIZE
H.SHIFT
H.KEYS
H.PIN
V.SIZE
V.SHIFT
V.SIN1
V.SIN2
H.SIN1
H.SIN2
TILT1
TILT2
TILT3
TILT4
HUE
COLOR
SHARP
DRV(G)
DRV(R)
DRV(B)
PIX
VOL
BKG(B)
BKG(R)
BKG(G)
BLK(T)
BLK(B)
BLK(L)
BLK(R)
BRT
V.SUB RGB
H.SUB RGB
V.DRIVE RGB
LD/A6
WR/A0-A7
SD
CLK
D0-D7
S.ON G
NORM/TEST
PL
PH
IC201 WAVE FORM
V.SHIFT
V-I CONV Q10
V-I CONV Q11
IC9 D-V SHIFT COMP
IC8 D-V SHIFT GEN
IC11 DV SHIFT PROT
RV5 SHIFT
IC10 V SHIFT GEN
V-I CONV Q12
V SHIFT COMP IC18
V.SHIFT SW IC12
PULSE GEN IC13
VD BUFF Q17·203
V SYNC INV Q9
RV4 V.HOLD
V.HOLD IC15
VD GEN IC19
V.SYNC BUFF Q13
S1 V.SYNC OFF
DVS SW Q14
V-D GEN IC19
V STOP PROT Q16
VD/OTHER
NORM/TEST
INT/EXT
HF HD COMP HOR/EXT SW IC14·202 D7·8
SW Q31
AFC IC22
HS(Y.DA)
H SYNC BUFF Q18
H.SYNC SEP
H.OSC
PRE DRIVE
AFC
RV2 F-V
F-V BUFF IC21(1/2)
PULSE GEN IC13
CURRENT MIRROR Q19·20
SW Q24
SW Q22
VIDEO AFC Q29
RV3 VIDEO AFC
V.SHIFT COMP IC18
S2 HD OFF
H.OSC BUFF Q21,26
INV Q27·28
SW Q33-Q35
FH LIMIT COMP IC23(1/2)
FH LIMIT COMP IC23(2/2)
LEVEL SHIFT IC24
H SHIFT IC16
RV6 FH LIMIT
H.SHIFT
HF HD BUFF Q15
HF·HD
F-V BUFF IC21(2/2)
H1 AFC AMP IC20
V-I CONV Q25
RV7 H1-AFC
HF HD COMP IC202
V.PULSE
VD SW Q404
VD
49
43
48
7
50
18
A
24
40
41
4
1
44

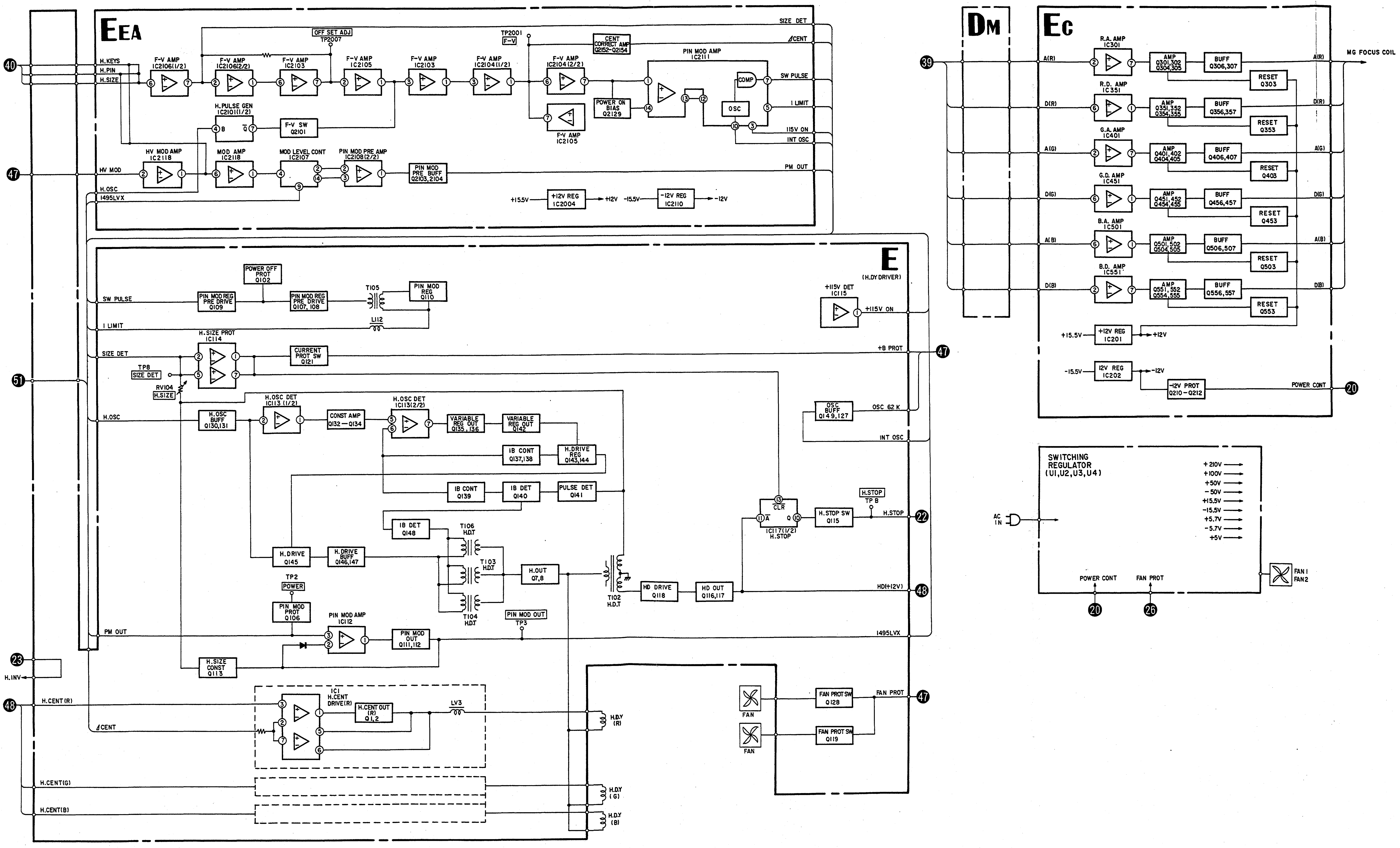

DA
(AFC, V HOLD WAVEFORM GEN)
CFB
IC201 WAVE FORM GEN
V.ZONE 2/3 ADJ
H.CENT (RGB)
V.SAW
V.PARA
H.PARA
H.SAW
HSXVS
HSXVP
H.SIZE
H.SHIFT
H.KEYS
H.PIN
V.SIZE
V.SHIFT
V.SIN1
V.SIN2
H.SIN1
H.SIN2
TILT1
TILT2
TILT3
TILT4
V.SHIFT
VS(Y.DA)
DVS/NVS
VID/OTHER
NORM/TEST
INT/EXT
HS(Y.DA)
H.SHIFT
HF-HD
V.PULSE
VD
IC8 D-V SHIFT GEN
V-I CONV Q10
IC9 D-V SHIFT COMP
V-I CONV Q11
IC11 DV SHIFT PROT
IC8 D-V SHIFT GEN
V SYNC INV Q9
RV5 SHIFT
IC10 V SHIFT GEN
V SHIFT COMP IC18
V-I CONV Q12
V SHIFT GEN IC10
V.SHIFT SW IC12
PULSE GEN IC13
VD BUFF Q17·203
RV4 V.HOLD
V.HOLD IC15
S1 V.SYNC OFF
V.SYNC BUFF Q13
V STOP PROT Q16
VD GEN IC19
DVS SW Q14
V-D GEN IC19
HF HD COMP HOR/EXT SW IC14·202 Q7·8
SW Q31
H SYNC BUFF Q18
AFC IC22
H.SYNC SEP
H.OSC
PRE DRIVE
AFC
RV2 F-V
PULSE GEN IC13
F-V BUFF IC21(1/2)
CURRENT MIRROR Q19·20
S2 HD OFF
V.SHIFT COMP IC18
H.OSC BUFF Q21,26
VIDEO AFC Q29
RV3 VIDEO AFC
SW Q24
SW Q22
INV Q27·28
SW Q33–Q35
FH LIMIT COMP IC23(1/2)
FH LIMIT COMP IC23(2/2)
LEVEL SHIFT IC24
H SHIFT IC16
RV6 FH LIMIT
HF HD BUFF Q15
F-V BUFF IC21(2/2)
HI AFC AMP IC20
V-I CONV Q25
RV7 HI-AFC
HF HD COMP IC202
VD SW Q404
HUE
COLOR
SHARP
DRV(G)
DRV(R)
DRV(B)
PIX
VOL
BKG(B)
BKG(R)
BKG(G)
BLK(T)
BLK(B)
BLK(L)
BLK(R)
BRT
V.SUB BUFF AMP IC1541(1/2) IC1542(1/2) IC1543(1/2)
V.SUB RGB
H.SUB BUFF AMP IC1538(1/2) IC1539(1/2) IC1540(1/2)
H.SUB RGB
V.MAIN BUFF AMP IC1544 IC1545(1/2)
V.DRIVE RGB
V.SQ
H.SQ
H.PARA
H.SAW(+)
V.PARA
V.SAW(+)
V.SAW(−)
H.SAW(−)
H.BIAS
HD
V BIAS
V.SIN
INV IC202
1/2 BUFF Q222
1/2H BUFF Q204·223
H.PARA AMP IC203
H.PARA BUFF IC208
H.SAW BUFF IC205
V.PARA BUFF IC207
REG1 AMP IC204
V.SAW BUFF Q221
REG1 BUFF IC211(1/2)
REG1 BUFF IC211(2/2)
HSXVP BUFF IC209
MULTIPLEX IC210
TILT SW BUFF Q213 | Q220
BUFF Q209·210
BUFF Q211·212
H SIN AMP IC206
1/2V
1/2H
H.SIN1
H.SIN2
H.BLK LEVEL DET IC7
BLK MIX IC402
BLK BUFF Q401·402
C BLK
H.SAW AMP IC17(2/2)
H.SAW AMP IC17(1/2)
AD HD COMP IC4
HD AMP Q5,6
HD BUFF Q1,4
AD HD GEN IC3
H.BLK GEN IC5
V-I CONV Q7
H.BLK COMP IC6(1/2)
H.BLK COMP IC6(2/2)
V-I CONV Q8
V-I CONV Q2
AD HD BUFF Q3
AD HD GEN IC3
H.BLK GEN IC5
HD BUFF Q201·202
SIZE LIMIT Q501
SIZE LIMIT
HD (12V)
MULTIPLEX Q701–Q706
SIZE ABL AMP IC601
REG1 AMP IC204
BUFF Q205–Q208
HD
V.SIZE
ABL
V.SIN1
V.SIN2
H.OSC
H.CENT (RGB)
SHARP
BRT
HUE
COLOR
PIX
DRV(R)
DRV(G)
DRV(B)
BKG(R)
BKG(G)
BKG(B)
H.KEYS
H.PIN
H.SIZE
V.SIZE
H.PARA
V.PARA
V.SIN1
H.SIN1
V.SIN2
H.SIN2
①
②
③
㊵
㊻
⑪
㊽
㊺
㉘
㊸
㊽
⑦
㊿
⑱
Ⓐ
㉔
㊵
㊶
(51)

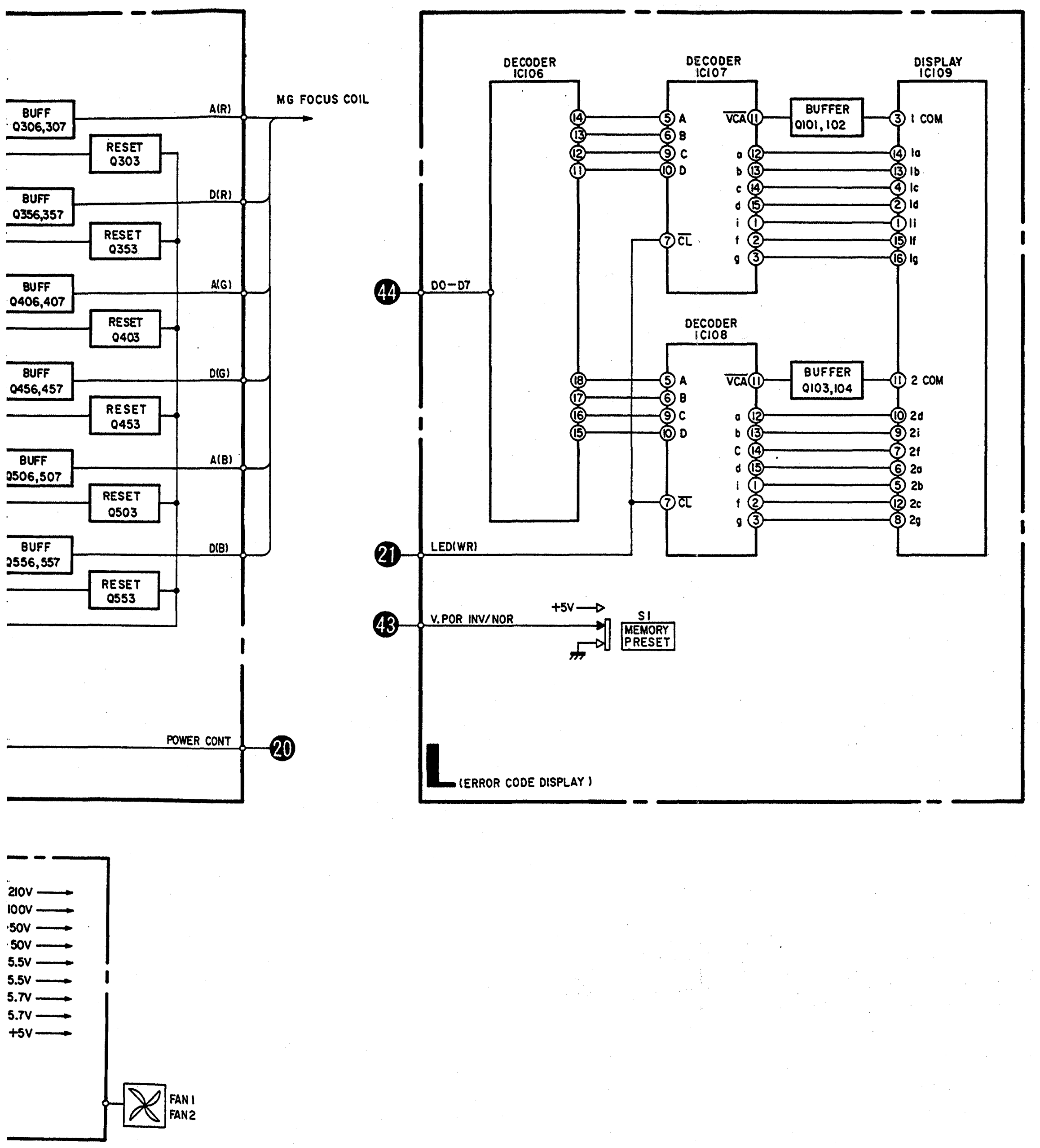

DCA
SUB AMP IC801
SUB PRE DRIVE IC802
H SUB (R.G.B)
V SUB (R.G.B)
R-H SUB DRIVE Q307
R-H SUB BUFF Q302-305
G-H SUB DRIVE Q313
G-H SUB BUFF Q308-311
B-H SUB DRIVE Q317
B-H SUB BUFF Q314,315,318 Q319
R-V SUB DRIVE Q410
R-V SUB BUFF Q405-408
G-V SUB DRIVE Q416
G-V SUB BUFF Q411-414
B-V SUB DRIVE Q422
B-V SUB BUFF Q417-420
H SUB (R)
H SUB (G)
H SUB (B)
V SUB (R)
V SUB (G)
V SUB (B)
I PROT
I PROT SW Q12, 13
IC50(1/2)
IC50(2/2)
R-V HEAP +POWER Q101
R-V HEAP -POWER Q102
G-V HEAP +POWER Q103
G-V HEAP -POWER Q104
B-V HEAP +POWER Q105
B-V HEAP -POWER Q106
HEAP +POWER Q1001
HEAP -POWER Q1004
HEAP +POWER Q1002
HEAP -POWER Q1005
HEAP +POWER Q1003
HEAP -POWER Q1006
+POWER (R.G.B)
- POWER (R.G.B)
DG
I PROT SW Q9
-15V CORRENT PROT Q10
-15V
FAN STOP
FAN STOP Q301,401,403
FAN 3
FAN 5
FAN 6
COMPARATER IC70(2/2)
OVER CONT
NC
BUFF Q6
H SIZE CONT IC11(1/2)
+50V CORRENT PROT Q3
H SIZE CONT
IC11(2/2) H SIZE CONT
-50V CORRENT PROT Q2
+50V
+50V SW Q1
COMPARATER IC70(1/2)
+15V
+50V SW Q4
+15.5V
RUSH FILTER Q5
Dc (SUB DY DRIVER)
43
25
26
45

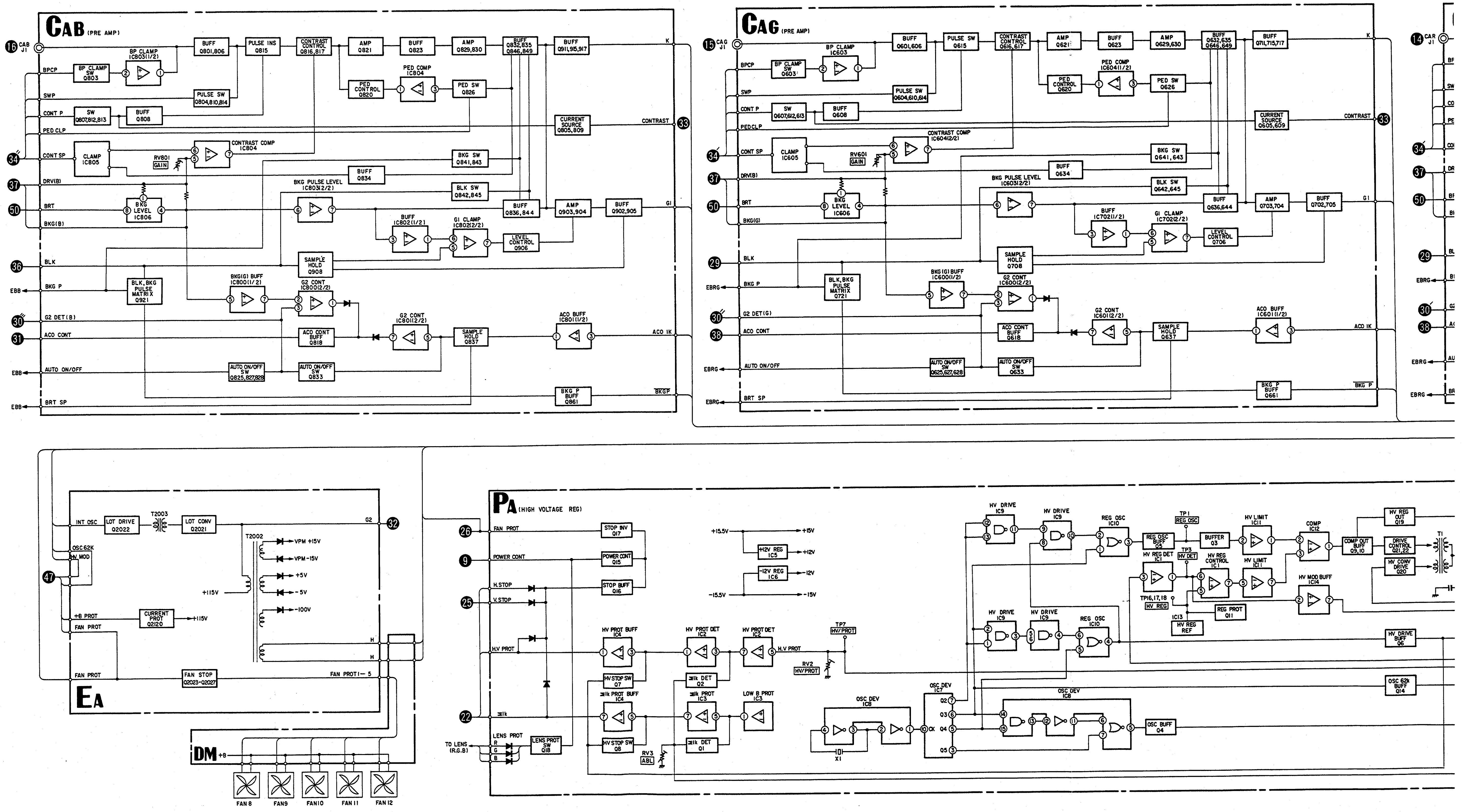

DE (ELECTRIC VOLUME, WAVEFORM GEN.)
H SIZE
V SIZE
MG VD
MG HD
CLK
SD
LD
WR
1/2H
H PARA
V SIN 1
V PARA
1/2V
H SIN 1
H SIN 2
V SIN 2
RV701 VS1 BIAS
RV702 VP BIAS
RV703 VS2 BIAS
+5V
-5V
1/2H MG GEN IC507
REG I MULTIPLEX 1 IC504
REG I MULTIPLEX 2 IC505
REG I MULTIPLEX 3 IC506
IC509 MG WAVEFORM GEN
INVERTER IC508
HP BUFF IC511
IC512(1/2) DC SHIFT
IC512(2/2) DC SHIFT
IC510 VPC DET
ZHP SW Q501
ZHP/ZVP BUFF Q502
ZTP SW Q503
OP MALTIPLEX 1 IC513
OP MALTIPLEX 2 IC514
OP MALTIPLEX 3 IC515
OP MALTIPLEX 4 IC516
V PHASE
M PHASE
H PHASE
HD
VD
V.POR INV/NOR
V.DRIVE (R)
V.DRIVE(G)
V.DRIVE(B)
V.INV
HD F-V CONV IC306(1/2)
HD SHIFT COMP IC304(2/2)
V-I CONV-1 Q303
V-I CONV-2 Q304
IC303 HD SHIFT GEN-2
HD SHIFT GEN IC305
HD AMP Q300-302
IC303 HD SHIFT GEN-1
MG HD BUFF-1 Q305,306
MG HD BUFF-2 Q307,308
OP HD
MG HD
HD SHIFT COMP IC304(1/2)
HD FV CONV IC306(2/2)
VD SHIFT COMP IC352(1/2)
V-I CONV Q352
VD INV Q351
IC351 VD SHIFT GEN
V-I CONV Q353
IC351 VD SHIFT GEN
VD SHIFT COMP IC352(2/2)
MG VD BUFF Q354
MG VD
V INV
INV SW Q83
R-V AMP IC1
R-V OUT IC2
G-V AMP IC21
G-V OUT IC22
B-V AMP IC41
B-V OUT IC42
DM
DD (V DY DRIVER)
40
49
26
46
40
41
27
43
26

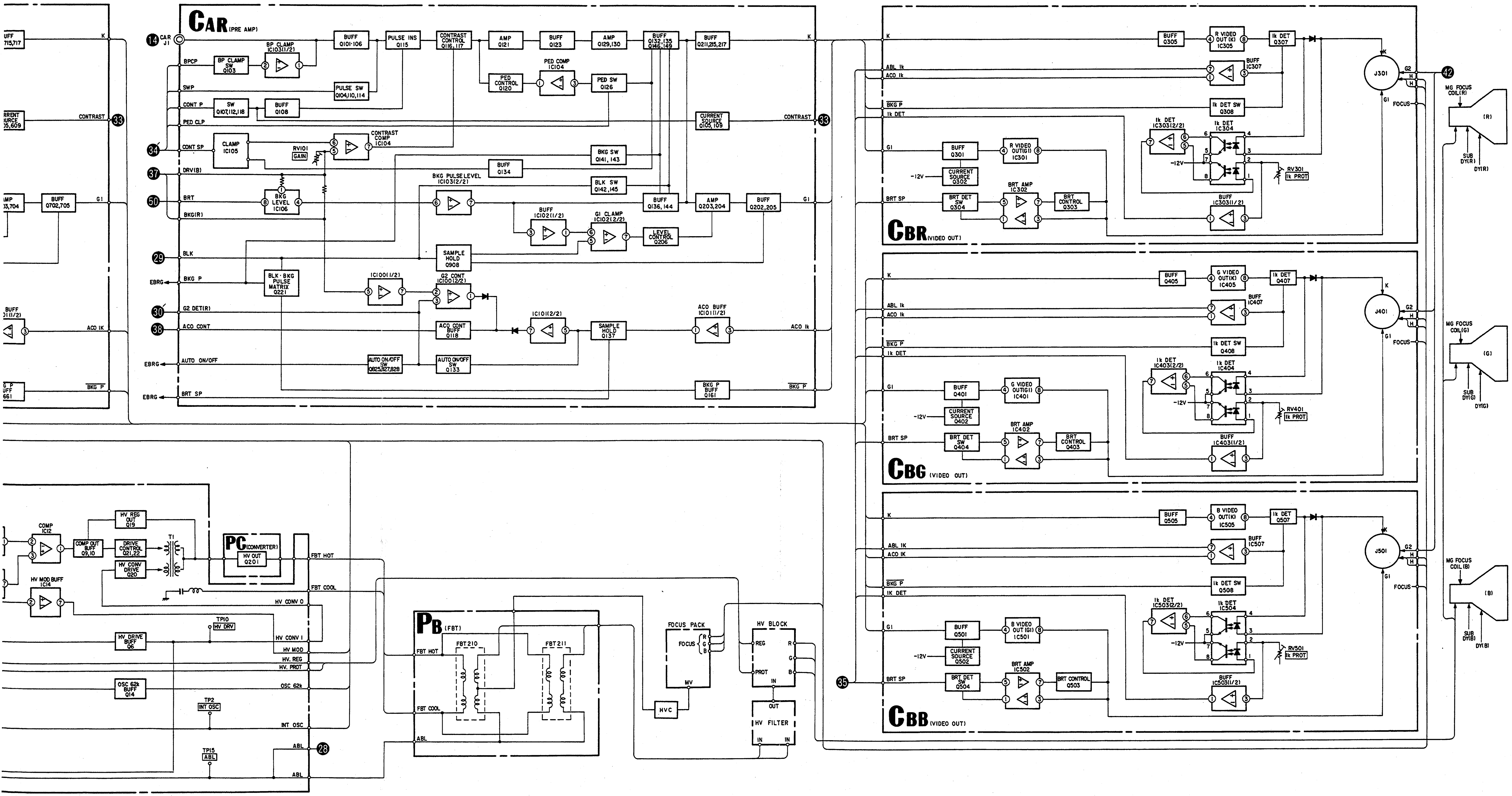

ECTRIC VOLUME, WAVEFORM GEN.)
1/2H MG GEN IC507
REG I MULTIPLEX 1 IC504
REG I MULTIPLEX 2 IC505
REG I MULTIPLEX 3 IC506
IC509 MG WAVE FORM GEN
HP BUFF IC511
IC512(1/2) DC SHIFT
IC512(2/2) DC SHIFT
IC510 VPC DET
ZHP SW Q501
ZHP/ZVP BUFF Q502
ZTP SW Q503
INVERTER IC508
OP MALTIPLEX 1 IC513
OP MALTIPLEX 2 IC514
OP MALTIPLEX 3 IC515
OP MALTIPLEX 4 IC516
IC503 P ON RESET
IC545 VOLTAGE REF
DATA BUFF IC517
ADDRESS DEC IC518-521
AND GATE IC522
DEC SEL Q504,505
H ZONE ADJ IC523-528
MG H ADJ IC529
IC530-535 V ZONE ADJ
IC536 MG ALL/V ADJ
DOP ADJ IC541-544
AOP ADJ IC527-540
SUB BUFF AMP IC601, IC602(1/2)
SUB BUFF AMP IC602(2/2), IC603
MF BUFF AMP IC604, IC605(1/2)
MF BUFF AMP IC605(2/2), IC606
AOP BUFF AMP IC607, IC608(1/2)
DOP BUFF AMP IC608(2/2), IC609
H SUB RGB
V SUB RGB
H MF RGB
V MF RGB
AOP RGB
DOP RGB
BM
8
11
38
32
35
39
33
PULSE IC1002-
HD
VD
CP
BLK
BLK BUFF Q1021-1023
ACO CONT
G2(R) CONT Q1030
G2(G) CONT Q1042
G2(R)
G2(G)
IC1011 IK PROT
MAX IK
IK DET
IK BUFF Q1046-1048
EBB
+15V
-15V
+12V R
-12V R
RD MG IC50
RST MG IC50
GD MG IC60
G ST M IC60
MF(H)
MF(V)
MG 1/2H
EBRG (MAGNET FOCUS D
HD F-V CONV IC306(1/2)
HD SHIFT COMP IC304(2/2)
H PHASE
HD
HD AMP Q300-302
V-I CONV-1 Q303
V-I CONV-2 Q304
IC303 HD SHIFT GEN-2
IC303 HD SHIFT GEN-1
HD SHIFT GEN IC305
HD SHIFT COMP IC304(1/2)
HD FV CONV IC306(2/2)
MG HD BUFF-1 Q305,306
MG HD BUFF-2 Q307,308
OP HD
MG HD
MG VD
VD SHIFT COMP IC352(1/2)
VD SHIFT COMP IC352(2/2)
V PHASE
VD
VD INV Q351
V-I CONV Q352
V-I CONV Q353
IC351 VD SHIFT GEN
HG VD BUFF Q354
DY DRIVER)
V INV
INV SW Q83
V.POR INV/NOR
V POR SW1,2 Q81,82
V DRIVE (R)
R-V AMP IC1
R-V OUT IC2
R-V RP Q1
V DRIVE (G)
G-V AMP IC21
G-V OUT IC22
G-V RP Q21
V DRIVE (B)
B-V AMP IC41
B-V OUT IC42
B-V RP Q41
SUB 5V
RY81
RY82
RY83
V DY (R)
V DY (G)
V DY (B)
PEAK ABL AMP IC201(2/2)
PEAK ABL DRIVE Q201
SIGNAL ABL AMP IC201(1/2)
SIGNAL ABL DRIVE Q202
IK R BUFF Q203,204 Q206
IK G BUFF Q207,208 Q211
IK B BUFF Q209-210 Q212
IK MAX Q205
IK(R)
IK(G)
IK(B)
ABLIK
ABL
MAX IK
EBD
HD/VD


BM
ZONE ADJ
IC530-535
V ZONE ADJ
IC536
MG ALL/V ADJ
DQP ADJ
IC541-544
AQP ADJ
IC527-540
LD
SD
CLK
X1
X12
HMG
PR
RGB
VP
DC
H PHASE
SEL
DQ1
DQ8
DQP (RGB)
AQ1
AQ8
AQP (RGB)
SUB BUFF AMP IC601, IC602(1/2)
H SUB RGB
SUB BUFF AMP IC602(2/2), IC603
V SUB RGB
MF BUFF AMP IC604, IC605(1/2)
H MF RGB
MF BUFF AMP IC605(2/2), IC606
V MF RGB
AQP BUFF AMP IC607, IC608(1/2)
AQP RGB
DQP BUFF AMP IC608(2/2), IC609
DQP RGB
PULSE GEN IC1002-1007
HD
VD
CP
BLK
BLK BUFF Q1021-1023
BRT S-P BUFF Q1017-1020
BLK BUFF Q1032
G2 DOWN Q1031, 1034 1037, 1039 1041
G2 BLK BUFF Q1025, 1027 1028
G2 BLK AMP Q1024, 1026 1029
G2 BLK BUFF Q1044, 1045
ACO CONT
G2(R) CONT Q1030
G2(G) CONT Q1042
G2(R)
G2(G)
MAX IK
IC1011 IK PROT
IK DET
IK BUFF Q1046-1048
MAX IK BUFF Q1049
IK PROT IC1013 Q1051
-12V PROT
CONT GEN Q1002
EBB
+15V
+12V REG IC401
+12V
+12V PROT Q401, 402
POWER CONT
-15V
-12V REG IC400
-12V PROT Q404
-12V
+12V REG IC1000 IC1010
+9V REG IC1012
+9V
+5V REG IC1009
+5V
-12V REG IC1008
BRT SP
CONT P
BP CP
PED CLP
SWP
CONT SP
G2 DET(R)
G2 DET(G)
G2 OUT(R)
G2 OUT(G)
IK PROT
CONTRAST
ON/OFF(RGB)
DRV(RGB)
BKG(RGB)
H STOP
RD MG AMP IC500
RD MG AMP Q500, 502 503, 505
RD MG BUFF Q501, 504
RST MG AMP IC501
IC502 R ST MG AMP
GD MG AMP IC600
GD MG AMP Q600, 602 603, 605
GD MG BUFF Q601, 604
G ST MG AMP IC601
IC602 G ST MG AMP
MF(H)
MF(V)
MG 1/2H
MG FOCUS
EBRG (MAGNET FOCUS DRIVE)
IK(R)
IK(G)
IK(B)
ABL IK
IK R BUFF Q203, 204 Q206
IK G BUFF Q207, 208 Q211
IK B BUFF Q209-210 Q212
PEAK ABL AMP IC201(2/2)
PEAK ABL DRIVE Q201
I K MAX Q205
SIGNAL ABL AMP IC201(1/2)
SIGNAL ABL DRIVE Q202
ABL
MAX IK
EBD
HD/VD
V MAG FOCUS AMP IC703
V MAG FOCUS AMP IC704
H MAG FOCUS AMP IC702
H MAG FOCUS AMP Q700-705
MFD
MFS
+PULSE GEN IC1
EBA (PULSE GEN)
PULSE REF
ABL Q1200, 1201
CONT RAST
BLK BUFF Q1203, 1206
BLK AMP Q1202, 1207
G2 BLK BUFF Q1209, 1224
G2 OUT(B)
H STOP PROT Q1210
G2 DET(B)
ACO CONT
G2 REG Q1208
G2 IN(B)
100V
+B1 REG IC1202
+B1 REG Q1215, 1217 1219
+B1
+12V REG IC1200, 1201 IC701
-12V REG IC700, 1203
EBB (MAGNET FOCUS DRIVER)
+PULSE BUFF Q102, 104, 105
-PULSE BUFF Q101, 103, 106 107
+50V SW Q403
+50V
-50V SW Q400
-50V
EBC (PULSE GEN)
8
11
38
32
35
29
34
30
42
22
A
24
33
37
36
28
31
39


EEA
H.KEYS
H.PIN
H.SIZE
F-V AMP IC2106(1/2)
F-V AMP IC2106(2/2)
OFF SET ADJ TP2007
F-V AMP IC2103
F-V AMP IC2105
F-V AMP IC2103
F-V AMP IC2104(1/2)
TP2001 F-V
CENT CORRECT AMP Q2152-Q2154
F-V AMP IC2104(2/2)
PIN MOD AMP IC2111
COMP
OSC
POWER ON BIAS Q2129
F-V AMP IC2105
H.PULSE GEN IC2101(1/2)
F-V SW Q2101
SIZE DET
⊿CENT
SW PULSE
I LIMIT
115V ON
INT OSC
PM OUT
HV MOD AMP IC2118
MOD AMP IC2118
MOD LEVEL CONT IC2107
PIN MOD PRE AMP IC2108(2/2)
PIN MOD PRE BUFF Q2103,2104
HV MOD
H.OSC
1495LVX
+15.5V
+12V REG IC2004
+12V
-15.5V
-12V REG IC2110
-12V
E
(H.DY DRIVER)
POWER OFF PROT Q102
PIN MOD REG PRE DRIVE Q109
PIN MOD REG PRE DRIVE Q107, 108
T105
PIN MOD REG Q110
L112
SW PULSE
I LIMIT
SIZE DET
H.SIZE PROT IC114
CURRENT PROT SW Q121
TP8 SIZE DET
RV104 H.SIZE
H.OSC
H.OSC BUFF Q130,131
H.OSC DET IC113(1/2)
CONST AMP Q132-Q134
H.OSC DET IC113(2/2)
VARIABLE REG OUT Q135,136
VARIABLE REG OUT Q142
IB CONT Q137,138
H.DRIVE REG Q143,144
IB CONT Q139
IB DET Q140
PULSE DET Q141
IB DET Q148
T106 H.D.T
T103 H.D.T
T104 H.D.T
H.OUT Q7,8
T102 H.D.T
H.DRIVE Q145
H.DRIVE BUFF Q146,147
TP2 POWER
PIN MOD PROT Q106
PIN MOD AMP IC112
PIN MOD OUT Q111,112
PIN MOD OUT TP3
PM OUT
H.SIZE CONST Q113
+115V DET IC115
+115V ON
+B PROT
OSC BUFF Q149,127
OSC 62K
INT OSC
H.STOP TP B
H.STOP
CLR
IC117(1/2) H.STOP
H.STOP SW Q115
HD DRIVE Q118
HD OUT Q116,117
HD(+12V)
1495LVX
IC1 H.CENT DRIVE(R)
H.CENT OUT (R) Q1,2
LV3
H.CENT(R)
⊿CENT
H.CENT(G)
H.CENT(B)
H.INV
H.D.Y (R)
H.D.Y (G)
H.D.Y (B)
FAN
FAN
FAN PROT SW Q128
FAN PROT SW Q119
FAN PROT
DM
Ec
R.A. AMP IC301
R.D. AMP IC351
G.A. AMP IC401
G.D. AMP IC451
B.A. AMP IC501
B.D. AMP IC551
A(R)
D(R)
A(G)
D(G)
A(B)
D(B)
AMP Q301,302 Q304,305
BUFF Q306,307
RESET Q303
AMP Q351,352 Q354,355
BUFF Q356,357
RESET Q353
AMP Q401,402 Q404,405
BUFF Q406,407
RESET Q403
AMP Q451,452 Q454,455
BUFF Q456,457
RESET Q453
AMP Q501,502 Q504,505
BUFF Q506,507
RESET Q503
AMP Q551,552 Q554,555
BUFF Q556,557
RESET Q553
MG FOCUS COIL
+15.5V
+12V REG IC201
+12V
-15.5V
12V REG IC202
-12V
-12V PROT Q210-Q212
POWER CONT
SWITCHING REGULATOR (U1,U2,U3,U4)
+210V
+100V
+50V
-50V
+15.5V
-15.5V
+5.7V
-5.7V
+5V
AC IN
POWER CONT
FAN PROT
FAN1 FAN2
(40)
(47)
(51)
(23)
(48)
(39)
(47)
(20)
(22)
(48)
(47)
(20)
(26)


BUFF Q306,307
RESET Q303
BUFF Q356,357
RESET Q353
BUFF Q406,407
RESET Q403
BUFF Q456,457
RESET Q453
BUFF Q506,507
RESET Q503
BUFF Q556,557
RESET Q553
A(R)
D(R)
A(G)
D(G)
A(B)
D(B)
MG FOCUS COIL
POWER CONT
20
44
21
43
D0–D7
LED(WR)
V.POR INV/NOR
DECODER IC106
DECODER IC107
DECODER IC108
DISPLAY IC109
BUFFER Q101,102
BUFFER Q103,104
VCA
CL
1 COM
2 COM
+5V
S1 MEMORY PRESET
L (ERROR CODE DISPLAY)
210V
100V
-50V
50V
5.5V
5.5V
5.7V
5.7V
+5V
FAN1
FAN2


CAB (PRE AMP)
CAB J1
BPCP
BP CLAMP SW Q803
BP CLAMP IC803(1/2)
BUFF Q801,806
PULSE INS Q815
CONTRAST CONTROL Q816,817
AMP Q821
BUFF Q823
AMP Q829,830
BUFF Q832,835 Q846,849
BUFF Q911,915,917
SWP
PULSE SW Q804,810,814
PED COMP IC804
PED CONTROL Q820
PED SW Q826
CONT P
SW Q807,812,813
BUFF Q808
PED CLP
CURRENT SOURCE Q805,809
CONTRAST
CONT SP
CLAMP IC805
RV801 GAIN
CONTRAST COMP IC804
BKG SW Q841,843
BUFF Q834
DRV(B)
BKG PULSE LEVEL IC803(2/2)
BLK SW Q842,845
BRT
BKG LEVEL IC806
BKG(B)
BUFF Q836,844
AMP Q903,904
BUFF Q902,905
BUFF IC802(1/2)
G1 CLAMP IC802(2/2)
LEVEL CONTROL Q906
BLK
SAMPLE HOLD Q908
BKG P
BLK,BKG PULSE MATRIX Q921
BKG(G) BUFF IC800(1/2)
G2 CONT IC800(2/2)
G2 DET(B)
G2 CONT IC801(2/2)
ACO BUFF IC801(1/2)
ACO CONT
ACO CONT BUFF Q818
SAMPLE HOLD Q837
ACO IK
AUTO ON/OFF
AUTO ON/OFF SW Q825,827,828
AUTO ON/OFF SW Q833
BRT SP
BKG P BUFF Q861
BKGP
EBB
K
G1
CAG (PRE AMP)
CAG J1
BP CLAMP SW Q603
BP CLAMP IC603
BUFF Q601,606
PULSE SW Q615
CONTRAST CONTROL Q616,617
AMP Q621
BUFF Q623
AMP Q629,630
BUFF Q632,635 Q646,649
BUFF Q711,715,717
PULSE SW Q604,610,614
PED COMP IC604(1/2)
PED CONTROL Q620
PED SW Q626
SW Q607,612,613
BUFF Q608
CURRENT SOURCE Q605,609
CLAMP IC605
RV601 GAIN
CONTRAST COMP IC604(2/2)
BKG SW Q641,643
BUFF Q634
BKG PULSE LEVEL IC603(2/2)
BLK SW Q642,645
BKG LEVEL IC606
BUFF Q636,644
AMP Q703,704
BUFF Q702,705
BUFF IC702(1/2)
G1 CLAMP IC702(2/2)
LEVEL CONTROL Q706
SAMPLE HOLD Q708
BLK,BKG PULSE MATRIX Q721
BKG(G) BUFF IC600(1/2)
G2 CONT IC600(2/2)
G2 DET(G)
G2 CONT IC601(2/2)
ACO BUFF IC601(1/2)
ACO CONT BUFF Q618
SAMPLE HOLD Q637
AUTO ON/OFF SW Q625,627,628
AUTO ON/OFF SW Q633
BKG P BUFF Q661
EBRG
CAR J1
EA
INT OSC
LOT DRIVE Q2022
T2003
LOT CONV Q2021
G2
OSC 62K
H MOD
T2002
VPM +15V
VPM -15V
+5V
-5V
-100V
+115V
+B PROT
CURRENT PROT Q2120
FAN PROT
FAN STOP Q2023-Q2027
FAN PROT 1- 5
H
DM
+B
FAN 8
FAN 9
FAN 10
FAN 11
FAN 12
PA (HIGH VOLTAGE REG)
FAN PROT
STOP INV Q17
POWER CONT
POWER CONT Q15
H.STOP
V.STOP
STOP BUFF Q16
+15.5V
+15V
+12V REG IC5
+12V
-12V REG IC6
-12V
-15.5V
-15V
H.V PROT
HV PROT BUFF IC4
HV PROT DET IC2
HV PROT DET IC2
TP7 HV/PROT
RV2 HV/PROT
HV STOP SW Q7
Ik DET Q2
Ik PROT BUFF IC4
Ik PROT IC3
LOW B PROT IC3
Ik
LENS PROT
TO LENS (R.G.B)
LENS PROT SW Q18
HV STOP SW Q8
RV3 ABL
Ik DET Q1
OSC DEV IC8
X1
OSC DEV IC7
OSC DEV IC8
OSC BUFF Q4
HV DRIVE IC9
REG OSC IC10
TP1 REG OSC
REG OSC BUFF Q5
BUFFER Q3
HV LIMIT IC11
COMP IC12
COMP OUT BUFF Q9,10
HV REG OUT Q19
DRIVE CONTROL Q21,22
HV CONV DRIVE Q20
T1
HV REG DET IC1
TP3 HV DET
HV REG CONTROL IC1
TP16,17,18 HV REG
IC13 HV REG REF
REG PROT Q11
HV MOD BUFF IC14
HV DRIVE BUFF Q6
OSC 62k BUFF Q14


CAR (PRE AMP)
CAR J1
BPCP
SWP
CONT P
PED CLP
CONT SP
DRV(B)
BRT
BKG(R)
BLK
BKG P
G2 DET(R)
ACO CONT
AUTO ON/OFF
BRT SP
EBRG
BP CLAMP SW Q103
BP CLAMP IC103(1/2)
SW Q107,112,118
BUFF Q108
CLAMP IC105
RV101 GAIN
CONTRAST COMP IC104
BKG LEVEL IC106
BUFF Q101-106
PULSE INS Q115
PULSE SW Q104,110,114
CONTRAST CONTROL Q116,117
AMP Q121
PED CONTROL Q120
PED COMP IC104
BUFF Q123
AMP Q129,130
PED SW Q126
BUFF Q132,135 Q146,149
BUFF Q211,215,217
CURRENT SOURCE Q105,109
BKG SW Q141,143
BUFF Q134
BKG PULSE LEVEL IC103(2/2)
BLK SW Q142,145
BUFF Q136,144
AMP Q203,204
BUFF Q202,205
BUFF IC102(1/2)
G1 CLAMP IC102(2/2)
LEVEL CONTROL Q206
SAMPLE HOLD Q908
BLK·BKG PULSE MATRIX Q221
IC100(1/2)
G2 CONT IC100(2/2)
ACO CONT BUFF Q118
IC101(2/2)
SAMPLE HOLD Q137
ACO BUFF IC101(1/2)
AUTO ON/OFF SW Q825,827,828
AUTO ON/OFF SW Q133
BKG P BUFF Q161
K
CONTRAST
G1
ACO Ik
BKG P
CURRENT SOURCE Q605,609
BUFF Q702,705
AMP Q703,704
BUFF Q715,717
CBR (VIDEO OUT)
ABL Ik
ACO Ik
Ik DET
BUFF Q305
R VIDEO OUT(K) IC305
Ik DET Q307
BUFF IC307
Ik DET SW Q308
Ik DET IC303(2/2)
Ik DET IC304
BUFF Q301
R VIDEO OUT(G1) IC301
CURRENT SOURCE Q302
-12V
RV301 Ik PROT
BRT DET SW Q304
BRT AMP IC302
BRT CONTROL Q303
BUFF IC303(1/2)
J301
G2
H
FOCUS
MG FOCUS COIL(R)
SUB DY(R)
DY(R)
CBG (VIDEO OUT)
BUFF Q405
G VIDEO OUT(K) IC405
Ik DET Q407
BUFF IC407
Ik DET SW Q408
Ik DET IC403(2/2)
Ik DET IC404
BUFF Q401
G VIDEO OUT(G1) IC401
CURRENT SOURCE Q402
RV401 Ik PROT
BRT DET SW Q404
BRT AMP IC402
BRT CONTROL Q403
BUFF IC403(1/2)
J401
MG FOCUS COIL(G)
SUB DY(G)
DY(G)
CBB (VIDEO OUT)
BUFF Q505
B VIDEO OUT(K) IC505
Ik DET Q507
BUFF IC507
Ik DET SW Q508
Ik DET IC503(2/2)
Ik DET IC504
BUFF Q501
B VIDEO OUT(G1) IC501
CURRENT SOURCE Q502
RV501 Ik PROT
BRT DET SW Q504
BRT AMP IC502
BRT CONTROL Q503
BUFF IC503(1/2)
J501
MG FOCUS COIL(B)
SUB DY(B)
DY(B)
COMP IC12
COMP OUT BUFF Q9,10
HV REG OUT Q19
DRIVE CONTROL Q21,22
HV CONV DRIVE Q20
T1
HV MOD BUFF IC14
PC (CONVERTER)
HV OUT Q201
FBT HOT
FBT COOL
HV CONV 0
HV CONV 1
HV MOD
HV. REG
HV. PROT
OSC 62k
INT OSC
ABL
TP10 HV DRV
HV DRIVE BUFF Q6
OSC 62k BUFF Q14
TP2 INT OSC
TP15 ABL
PB (FBT)
FBT 210
FBT 211
FOCUS PACK
FOCUS
MV
HVC
HV BLOCK
REG
PROT
IN
OUT
HV FILTER
14
33
34
37
50
29
30
38
42
35
28

BA BOARD

IC1	SYSTEM SW-1	Q208	GEN SW
IC2	DECODER	Q209	NT/PAL Y BUFF-2
IC3	TRANSIENT	Q210	NT/PAL Y BUFF-1
IC5	CLK GEN.	Q212	NT/PAL C BUFF-2
IC6	VIDEO AMP	Q213	NT/PAL Y BUFF-1
IC7	SYSTEM SW-2	Q301	9V REG.
IC8	MATRIX	Q302	BLK BUFF-1
IC9	BRT CONT-2	Q303	B-Y BUFF-2
IC10	COMB FILTER	Q304	R-Y BUFF-2
IC11	50/60 DET.	Q305	CODE 2 SW-1
IC12	SHARPNESS	Q306	CODE 1 SW-1
IC13	LEVEL SHIFT-1	Q307	CODE SW-2
IC14	MODE DET.	Q308	CODE SW-2
IC15	JUNGLE	Q309	NT 3.58 SW
IC16	12V REG.	Q310	NT 4.43 SW
IC17	5V REG.	Q311	TRAP SW
IC19	SYNC BUFF.	Q312	TRAP SW
		Q313	Y AMP-3
		Q314	CLAMP BUFF-1
Q2	MODE SW-1	Q315	CLAMP BUFF-2
Q3	VIDEO BUFF-1	Q316	MODE DET
Q7	C BUFF.	Q317	Y AMP-2
Q8	MODE SW-1	Q318	Y AMP
Q9	VIDEO AMP-1	Q319	MODE SW-7
Q10	VIDEO AMP-2	Q320	MODE SW-8
Q11	VIDEO AMP-3	Q321	MODE SW-9
Q12	Y BUFF-1	Q323	REF DC BUFF.
Q13	Y BUFF-2	Q324	BGP SHIFT
Q14	SECAM C BUFF.	Q325	50/60 SW
Q15	MODE SW-10	Q326	V SYNC SW
Q16	C FILTER SW	Q327	Y CLAMP-2
Q17	NT/PAL C BUFF.	Q329	BRT CONT-1
Q18	CLAMP-4	Q330	CLAMP BUFF-3
Q19	CLAMP-6	Q336	Y AMP-6
Q20	NT/PAL VIDEO BUFF.	Q337	Y AMP-5
Q21	Y MODE SW-6	Q338	Y AMP-4
Q22	Y MODE SW-7	Q340	MODE DET.
Q23	B/W SW-4	Q350	GEN SW
Q24	POWER CONT-1	Q351	CLIP BUFF.
Q25	POWER CONT-2	Q352	CLIP BUFF.
Q26	SECAM SW-1	Q362	Y BUFF.
Q27	SECAM SW-2		
Q28	SECAM SW-3		
Q29	NT/PAL VIDEO	D1	SYSTEM DET-1
Q30	NT/PAL VIDEO AMP-1	D2	SYSTEM DET-2
Q31	NT/PAL VIDEO AMP-2	D3	B/W SW-1
Q32	CLAMP-5	D4	B/W SW-2
Q33	R-Y BUFF-1	D5	Y MODE SW-1
Q34	B-Y BUFF-1	D6	Y MODE SW-2
Q35	MODE SW-2	D7	Y MODE SW-3
Q36	CLAMP	D8	MODE SW-3
Q37	ID	D9	CLAMP-3
Q38	NT OSC SW	D10	CLAMP-2
Q39	NT CLK BUFF-1	D11	CLAMP-1
Q40	PAL CLK BUFF-2	D12	NT 3.58 DET.
Q41	PAL OSC SW	D13	MODE SW-11
Q42	Y MODE SW-7	D14	Y MODE SW-4
Q43	Y MODE SW-5	D101	B/W SW-3
Q45	C FILTER SW	D102	POWER CONT.
Q48	R-Y AMP-1	D103	SECAM SW-4
Q49	R-Y AMP-2	D107	BLK ADD-2
Q50	B-Y AMP-1	D108	+12V PROT.
Q51	B-Y AMP-2	D109	+5V PROT.
Q52	VIDEO BUFF-2	D110	SECAM SW
Q118	NT/PAL Y AMP-3	D112	MODE SW-4
Q119	NT/PAL Y AMP-1	D113	MODE SW-5
Q120	NT/PAL Y AMP-2	D118	MODE SW-6
Q152	SYSTEM MODE SW-2	D132	C FILTER SW
Q201	NT CLK SW	D201	Y CLAMP-1
Q202	CLK BUFF-3	D301	LEVEL SHIFT-2
Q203	CLK BUFF-4	D303	Y LEVEL ADJ-2
Q204	PAL CLK SW	D304	Y LEVEL ADJ-1
Q205	CLK AMP-1	D350	LIMIT
Q206	CLK AMP-2	D351	LIMIT
Q207	CLK AMP-3	D352	LEVEL SHIFT

BA BOARD (COMPONENT SIDE)

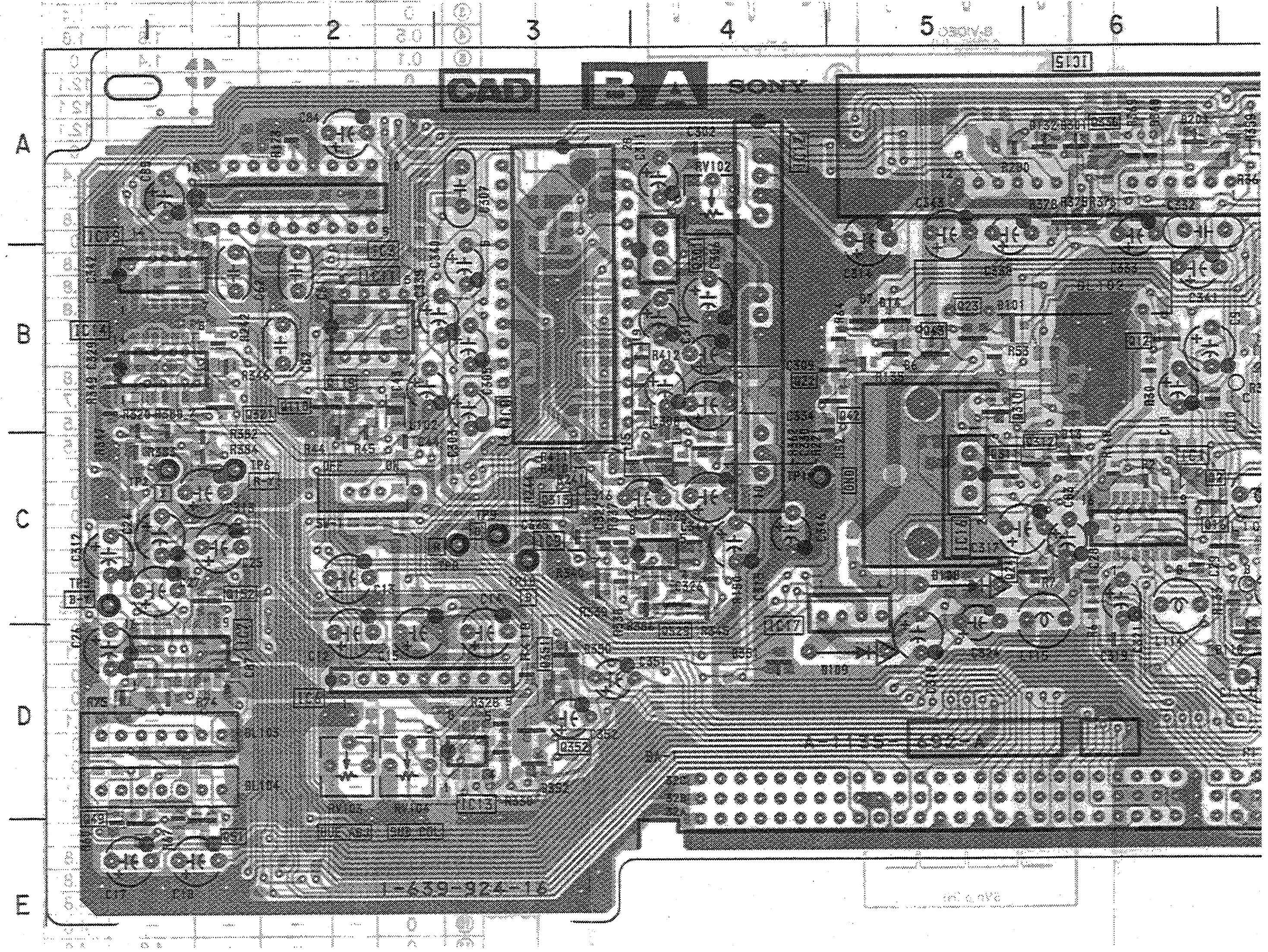
IC	
IC1	C-6
IC2	B-7
IC3	A-2
IC5	C-10
IC6	D-2
IC7	D-1
IC8	B-3
IC9	C-4
IC10	D-9
IC11	B-2
IC12	A-4
IC13	D-3
IC14	B-2
IC15	A-6
IC16	C-5
IC17	C-5
IC19	B-2

TRANSISTOR	
Q2	C-6
Q7	C-7
Q12	B-6
Q14	C-7
Q16	C-6
Q19	D-8
Q22	B-4
Q23	B-5
Q24	C-5
Q27	A-7
Q28	A-7
Q29	C-8
Q32	D-8
Q36	D-8
Q42	B-5
Q43	B-5
Q49	E-1
Q51	E-1
Q118	B-2
Q119	B-2
Q152	C-1
Q205	C-8
Q206	C-8
Q207	C-9
Q301	B-4
Q310	B-5
Q311	C-5
Q312	C-6
Q313	C-4
Q321	B-1
Q329	C-4
Q336	A-6
Q351	D-3
Q352	D-3
Q362	A-7

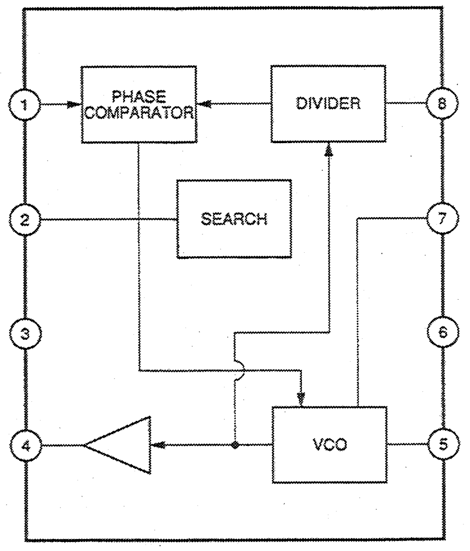
DIODE	
D2	A-7
D6	B-5
D7	B-5
D10	D-7
D13	C-6
D14	B-5
D101	B-5
D103	A-7
D108	C-5
D109	D-5
D110	D-7
D132	A-6
D201	A-6
D301	A-6
D350	D-3
D351	D-4
D352	D-3

ADJUSTING ELEMENT	
CT101	A-9
CT102	A-9
RV101	B-8
RV102	A-4
RV103	D-2
RV104	D-2
RV105	A-9

– BA BOARD – <Component Side>

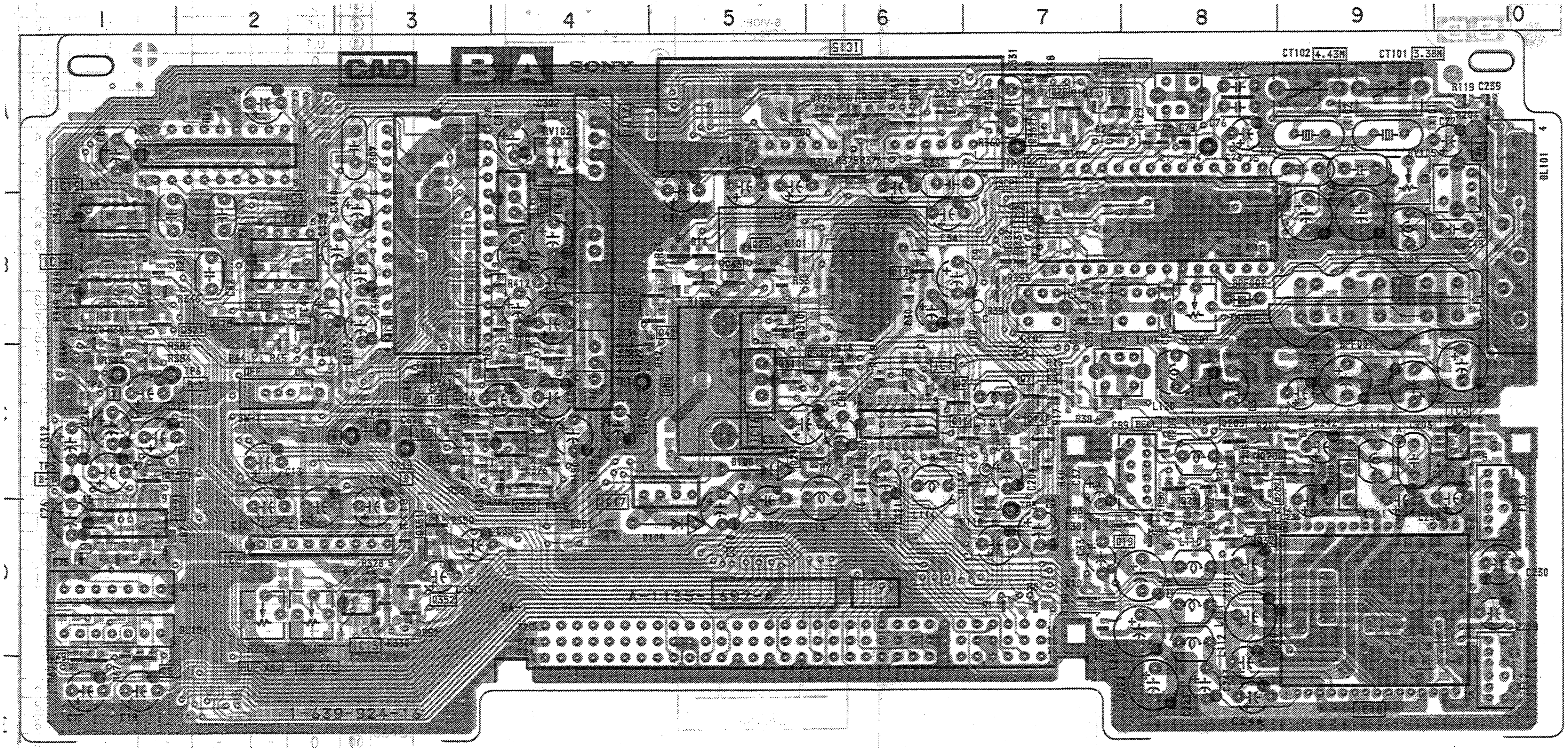


BA BOARD IC5 NJM2228

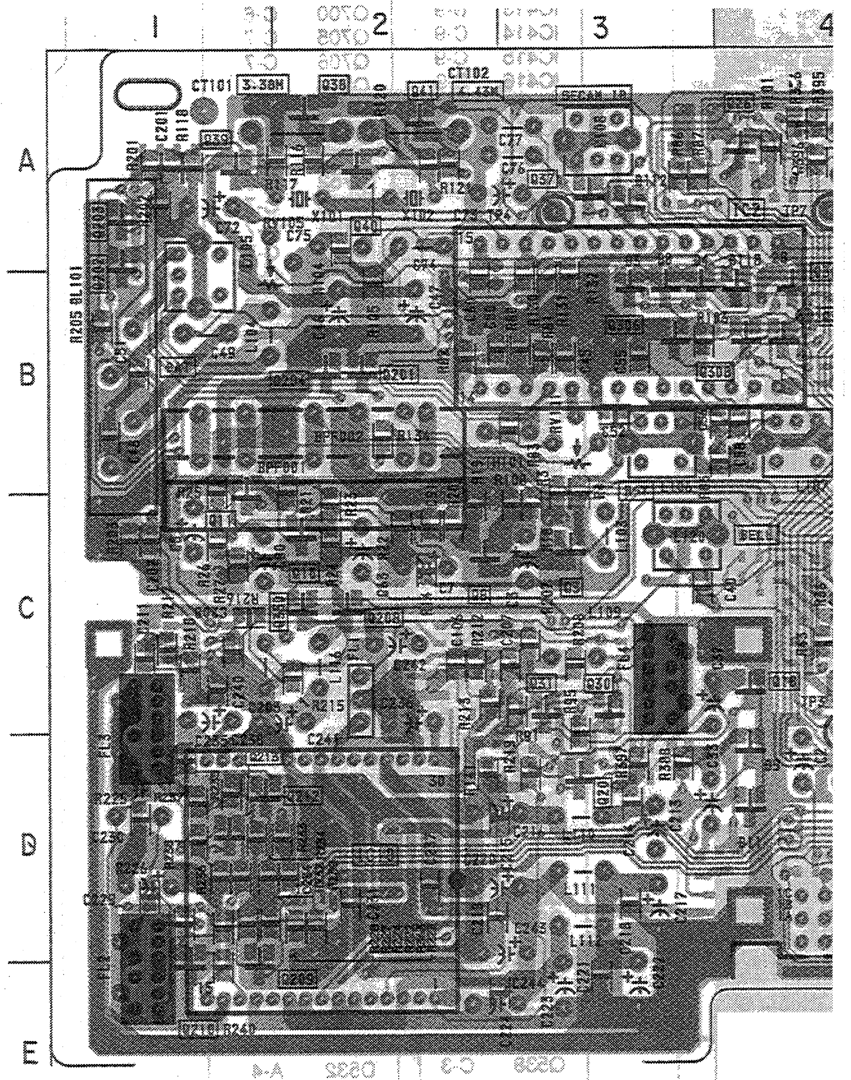


BA [VIDEO DECODER]

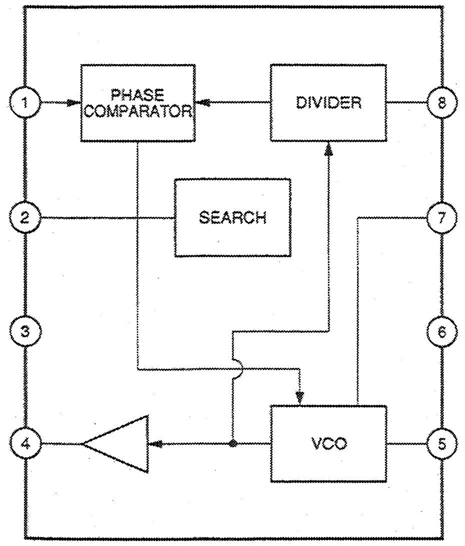
– BA BOARD – <Component Side>

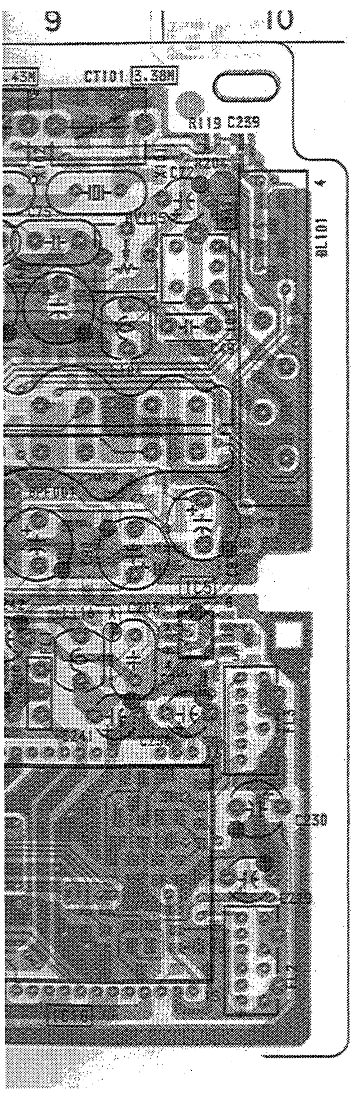

1
2
3
4
5
6
7
8
9
10
CAD
BA
SONY
1-639-924-16

<Conductor Side>

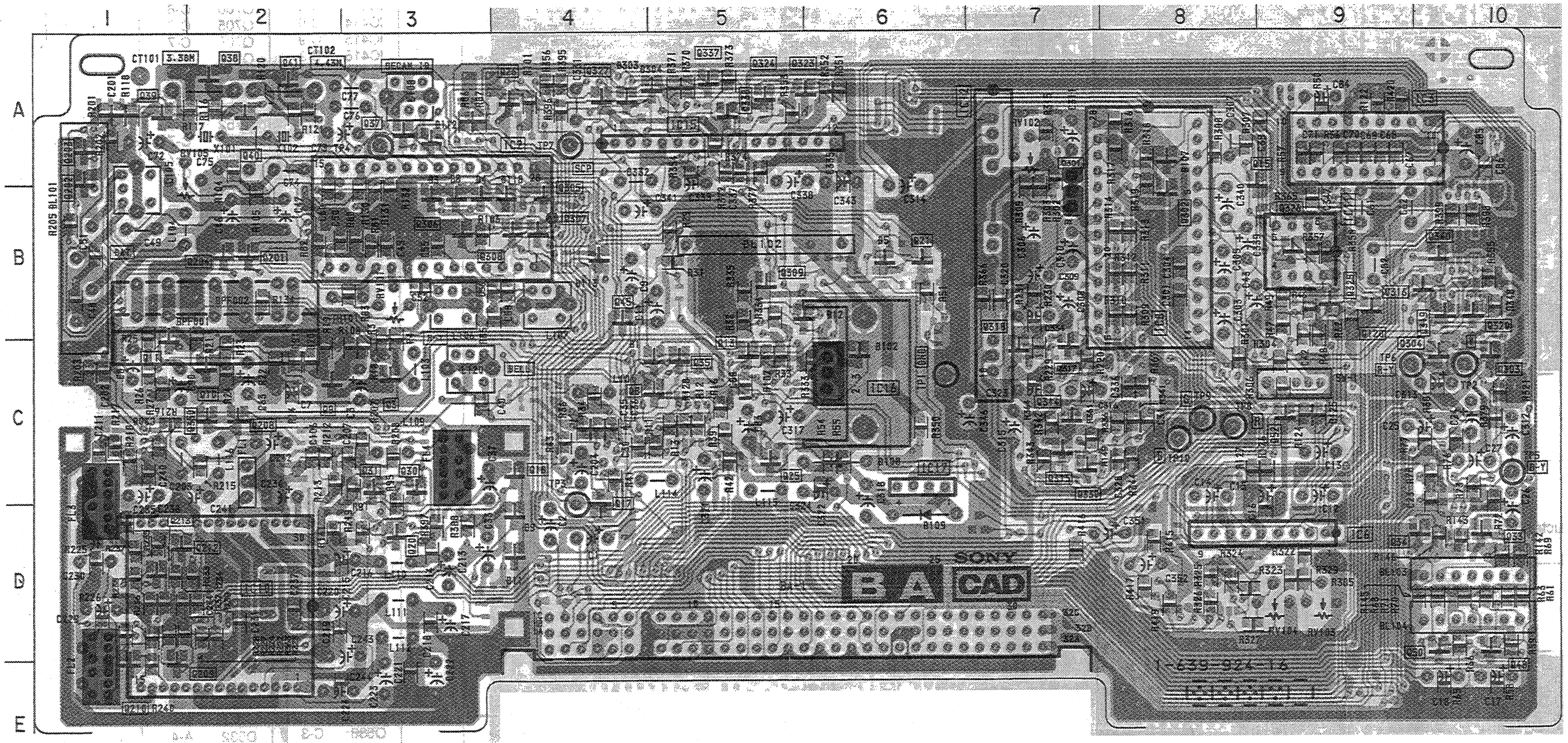


BA BOARD IC5 NJM2228


1
2
3
4
5
6
7
8
PHASE COMPARATOR
DIVIDER
SEARCH
VCO


9
10
CT101
3.38H
R119
C239
BL101
C230
IC10

<Conductor Side>


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
CT101
3.38H
CT102
4.43H
SECAM 10
BL101
R205
IC6
IC16
IC17
TP1
SONY
BA
CAD
1-639-924-16

BA BOARD (CONDUCTOR SIDE)

IC	
IC2	B-3
IC3	A-9
IC6	D-9
IC8	B-8
IC10	D-2
IC11	B-9
IC12	A-7
IC15	A-5
IC16	C-6
IC17	C-6

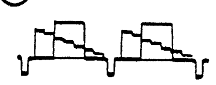
TRANSISTOR	
Q3	C-3
Q8	C-5
Q9	C-2
Q10	C-2
Q11	C-1
Q13	C-5
Q15	A-8
Q17	C-4
Q18	C-4
Q20	D-3
Q21	B-6
Q25	C-5
Q26	A-4
Q30	C-3
Q31	C-3
Q33	D-10
Q34	D-9
Q35	C-5
Q37	A-3
Q38	A-2
Q39	A-1
Q40	A-2
Q41	A-2
Q45	B-4
Q48	D-10
Q50	D-9
Q52	C-8
Q120	B-9
Q201	B-2
Q202	A-1
Q203	A-1
Q204	B-2
Q208	C-2
Q209	E-1
Q210	E-1
Q212	D-1
Q213	D-1
Q301	B-7
Q302	B-8
Q303	B-10
Q304	C-9
Q305	B-4
Q306	B-3
Q307	B-4
Q308	B-4
Q309	B-5
Q314	C-7
Q315	C-7
Q316	B-9
Q317	C-7
Q318	C-7
Q319	B-10
Q320	B-10
Q323	A-5
Q324	A-5
Q325	B-9
Q326	B-9
Q327	A-4
Q330	C-7
Q337	A-5
Q338	A-5
Q340	B-9
Q350	C-2

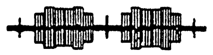
DIODE	
D1	C-5
D3	B-3
D4	B-3
D5	B-6
D8	B-3
D9	D-4
D11	D-4
D12	B-6
D102	C-6
D107	A-8
D108	C-6
D109	D-6
D112	A-3
D113	B-4
D118	C-4
D303	A-4
D304	A-4

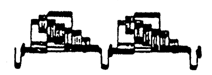
ADJUSTING ELEMENT	
CT101	A-1
CT102	A-2
RV101	B-3
RV102	A-7
RV103	D-9
RV104	D-9
RV105	A-1

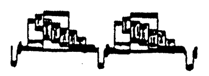
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

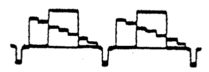
BB BOARD

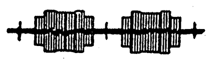
①

S-VIDEO
0.9Vp-p (H)

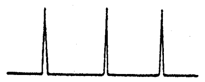
②

S-VIDEO
0.5Vp-p (H)

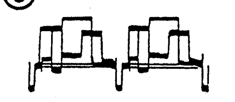
③

0.55Vp-p (H)

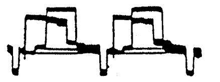
④

0.65Vp-p (H)

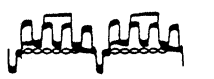
⑤

S-VIDEO
1Vp-p (H)

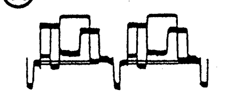
⑥

S-VIDEO
0.55Vp-p (H)

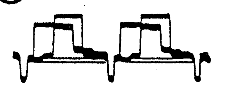
⑦

5Vp-p (H)

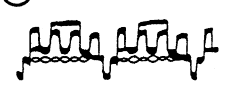
⑧

0.7Vp-p (H)

⑨

0.65Vp-p (H)

⑩

0.8Vp-p (H)

⑪

0.7Vp-p (H)

⑫

0.65Vp-p (H)

⑬

0.8Vp-p (H)

BB BOARD

REF.	Pin No.	NTSC 3.58	PAL	SECAM	NTSC 4.43	S-VIDEO	R.G.B
IC404	①	0	–	–	–	–	1.4
	②	0.1	–	–	–	1.6	0
	③	0	–	–	–	–	1.4
	④	0.5	–	–	–	1.8	1.8
	⑤	0.1	–	–	–	1.4	0
	⑨	0	–	–	–	–	12.1
	⑩	0	–	–	–	–	12.1
	⑪	0	–	–	–	–	12.1
	⑫	1.4	–	–	–	0.1	0
	⑬	0	–	–	–	–	1.4
	⑭	1.8	–	–	–	0.5	–
	⑮	0.5	–	–	–	2.0	1.8
IC405	①	4.3	–	–	–	–	0
	②	0	–	–	–	–	4.8
	③	0	–	–	–	–	4.8
	④	0	–	–	–	–	4.8
	⑥	4.4	–	–	–	0	0
	⑦	4.8	–	–	–	0	–
	⑨	0	–	–	–	–	4.8
	⑪	0	–	–	–	–	3.7
	⑫	0	–	–	–	–	4.5
	⑭	0	–	–	–	–	3.5
IC408	③	4.4	–	–	–	0	–
	④	4.4	–	–	–	0	0
	⑤	0.1	–	–	–	–	0
	⑨	4.7	–	–	–	–	0
	⑩	4.7	–	–	–	–	0
	⑪	4.7	–	–	–	–	0
	⑭	0	–	–	–	–	–4.8
IC414	⑤	–	–	–	–	–	0
	⑥	–	–	–	–	–	3.1
	⑪	–	–	–	–	0.1	0
IC415	⑤	–	–	–	–	–	0
	⑥	–	–	–	–	–	3.1
	⑪	–	–	–	–	0.1	0
IC416	⑤	–	–	–	–	–	0
	⑥	–	–	–	–	–	3.1
	⑪	–	–	–	–	0.1	0
IC423	②	4.8	–	–	–	0	–
	⑤	0	–	–	–	–	4.8
	⑥	0	–	–	–	–	4.8
	⑧	0	–	–	–	–	4.8
	⑩	0	–	–	–	–	4.8
	⑪	0	–	–	–	4.8	4.8
	⑫	0	–	–	–	–	4.8
	⑬	4.7	–	–	–	–	0

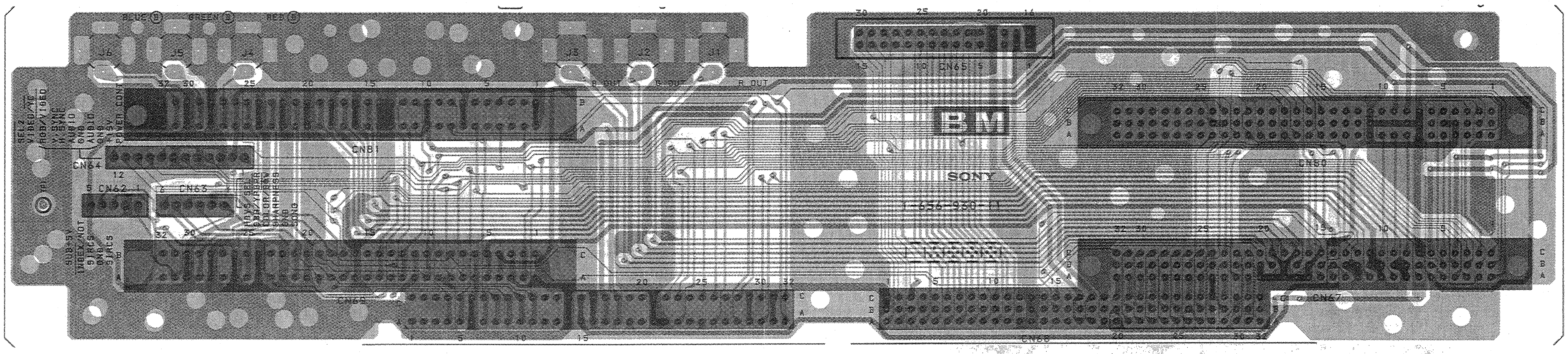
REF.		NTSC 3.58	PAL	SECAM	NTSC 4.43	S-VIDEO	R.G.B
Q458	B	0.5	–	–	–	2.0	1.8
	C	0	–	–	–	0	0
	E	1.3	–	–	–	2.8	2.6
Q459	B	0.5	–	–	–	1.8	1.8
	C	0	–	–	–	0	0
	E	1.3	–	–	–	2.6	2.6
Q460	B	1.8	–	–	–	0.5	–
	C	0	–	–	–	0	0
	E	2.6	–	–	–	1.3	–
Q506	B	0.6	–	–	–	–	–
	C	0	–	–	–	–	0
	E	0	–	–	–	–	1.4
Q507	B	0.6	–	–	–	–	–
	C	0	–	–	–	–	0
	E	0	–	–	–	–	1.4
Q508	B	0.6	–	–	–	–	–
	C	0	–	–	–	–	0
	E	0	–	–	–	–	1.4
Q509	B	0.7	–	–	–	0.6	–
	C	0	–	–	–	0	0
	E	1.4	–	–	–	0.1	0
Q516	B	0.6	–	–	–	0.8	–
	C	0	–	–	–	0	0
	E	0.1	–	–	–	1.6	0
Q517	B	0.7	–	–	–	–	0.6
	C	0	–	–	–	0	0
	E	0.1	–	–	–	1.4	0
Q528	B	4.8	–	–	–	0	–
	C	0	–	–	–	4.0	–
	E	0	–	–	–	0	–
Q529	B	0	–	–	–	4.0	–
	C	1.4	–	–	–	0.1	0
	E	0	–	–	–	0	–
Q530	B	4.8	–	–	–	0	–
	C	0.1	–	–	–	1.6	0
	E	0	–	–	–	0	–
Q531	B	4.8	–	–	–	0	–
	C	0.1	–	–	–	1.4	0
	E	0	–	–	–	0	–
Q539	B	0.3	–	–	–	–	3.8
	C	4.0	–	–	–	2.6	0
	E	0	–	–	–	0	0
Q656	B	0	–	–	–	4.8	–
	C	4.1	–	–	–	0.1	–
	E	0	–	–	–	0	–

BB BOARD

IC401	SYNC. SW-1	Q544	MODE SW-22
IC402	+12V REG.	Q546	MODE SW-24
IC403	–12V REG.	Q547	MODE SW-25
IC404	SIG. SW	Q548	MODE SW-26
IC405	MODE SW-1	Q549	MODE SW-27
IC407	SYNC SW-2	Q550	MODE SW-28
IC408	MODE SW-2	Q551	MODE SW-29
IC409	MODE SW-3	Q552	MODE SW-30
IC410	SIG. CLAMP-1	Q650	R CLAMP
IC411	SIG. CLAMP-2	Q651	R BUFF-1
IC412	AUDIO ATT.	Q652	R BUFF-2
IC413	TEST SIG. GEN.	Q653	R BUFF-3
IC414	R SIG. SW	Q654	R BUFF-4
IC415	G SIG. SW	Q656	MODE SW-31
IC416	B SIG. SW	Q700	G CLAMP
IC417	S ON G SYNC SEP.	Q701	G BUFF-1
IC418	R AMP	Q702	G BUFF-2
IC419	G AMP	Q703	G BUFF-3
IC420	B AMP	Q704	CB SW-1
IC422	MODE ENCODER-1	Q705	CB SW-2
IC423	MODE ENCODER-2	Q706	CB SW-3
IC424	MODE ENCODER-3	Q707	CB SW-4
		Q708	G BUFF-4
		Q709	CB SW-5
Q401	+5V REG.	Q710	G BUFF-5
Q402	–5V REG.	Q741	MODE SW-31
Q403	POWER CONT-1	Q750	B CLAMP
Q404	POWER CONT-2	Q751	B BUFF-1
Q405	POWER CONT-3	Q752	B BUFF-2
Q440	SIRCS SW	Q753	B BUFF-3
Q450	SIRCS SW-1	Q754	B BUFF-4
Q451	SIRCS SW-2	Q755	B BUFF-5
Q452	SIRCS SW-3	Q756	B BUFF-6
Q453	SIRCS SW-4	Q757	B BUFF-7
Q454	SIRCS SW-5	Q800	MODE BUFF.
Q456	SIRCS SW-6		
Q457	SIRCS SW-7		
Q458	VIDEO BUFF.	D401	+12V PROT.
Q459	VIDEO BUFF.	D402	–12V PROT.
Q460	VIDEO BUFF.	D440	SIRCS OR
Q501	H. SYNC SW-1	D450	SIRCS OR
Q502	H. SYNC SW-2	D451	AUDIO PROT-1
Q503	V. SYNC SW-1	D452	LEVEL SHIFT
Q504	V. SYNC SW-2	D501	H. SYNC CLAMP
Q506	R BUFF.	D502	V. SYNC CLAMP
Q507	G BUFF.	D503	VOLTAGE PROT.
Q508	B BUFF.	D505	PROT.
Q509	VIDEO BUFF.	D506	POW CONT.
Q510	MODE SW-1	D507	H. SYNC PROT.
Q511	MODE SW-2	D508	V. SYNC PROT.
Q512	MODE SW-3	D509	R PROT-1
Q513	MODE SW-4	D510	R PROT-2
Q514	MODE SW-5	D511	G PROT-1
Q515	MODE SW-6	D512	G PROT-2
Q516	Y BUFF-1	D513	B PROT-1
Q517	C BUFF-1	D514	B PROT-2
Q520	MODE SW-7	D516	Y PROT.
Q521	MODE SW-8	D518	C PROT.
Q522	VIDEO AMP-1	D520	S SW PROT-1
Q523	VIDEO AMP-2	D521	S SW PROT-2
Q524	VIDEO BUFF-2	D522	VIDEO PROT-1
Q528	MODE SW-9	D523	VIDEO PROT-2
Q529	MODE SW-10	D524	HD SEL PROT.
Q530	MODE SW-11	D525	LEVEL SHIFT
Q531	MODE SW-12	D526	MODE SW-1
Q534	MODE SW-13	D527	SUB 5V PROT.
Q535	MODE SW-14	D528	MODE SW-2
Q536	MODE SW-15	D529	LEVEL SHIFT
Q537	MODE SW-16	D531	PROT.
Q538	MODE SW-17	D532	PROT.
Q539	MODE SW-17	D533	PROT.
Q540	MODE SW-18	D534	PROT.
Q541	MODE SW-19	D634	MODE OR-1
Q542	MODE SW-20	D652	MODE OR-2
Q543	MODE SW-21	D653	MODE OR-3

BM [MOTHER]

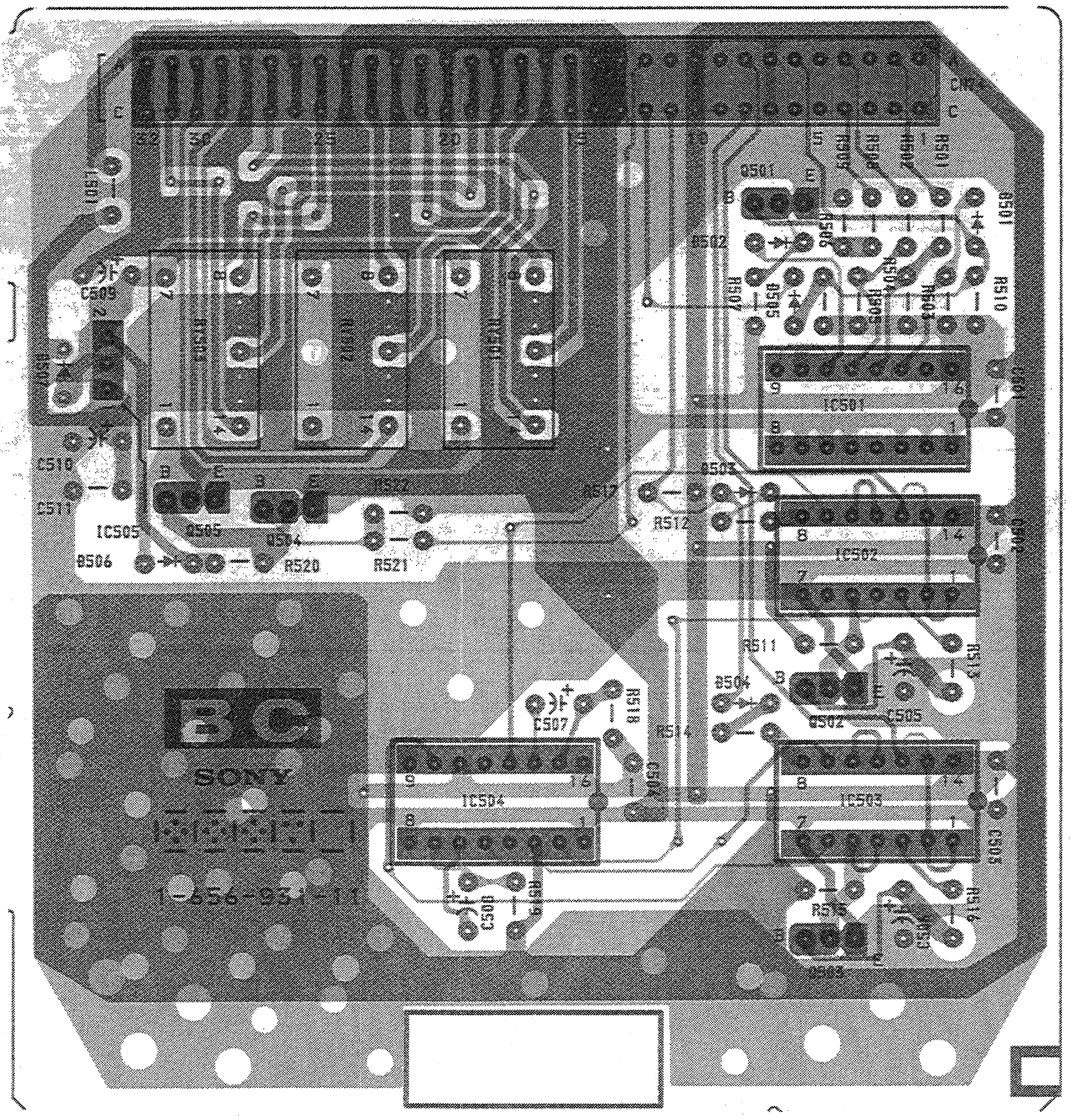
– BM BOARD –


BLUE
GREEN
RED
J6
J5
J4
J3
J2
J1
B OUT
G OUT
R OUT
SEL2
VIDEO/YC
RGB/VIDEO
V.SYNC
H.SYNC
AUDIO
GND
AUDIO
GND
+15V
POWER CONT
CN64
12
5 CN62 1
2 CN63
CN61
SUB+5V
INDEX/NOT
SIRCS
GND
SIRCS
COLOR/SEV
SHARPNESS
GND
CN65
CN66
CN67
CN68
CN60
BM
SONY
1-656-960-11
A
B
C
1
5
10
15
20
25
30
32

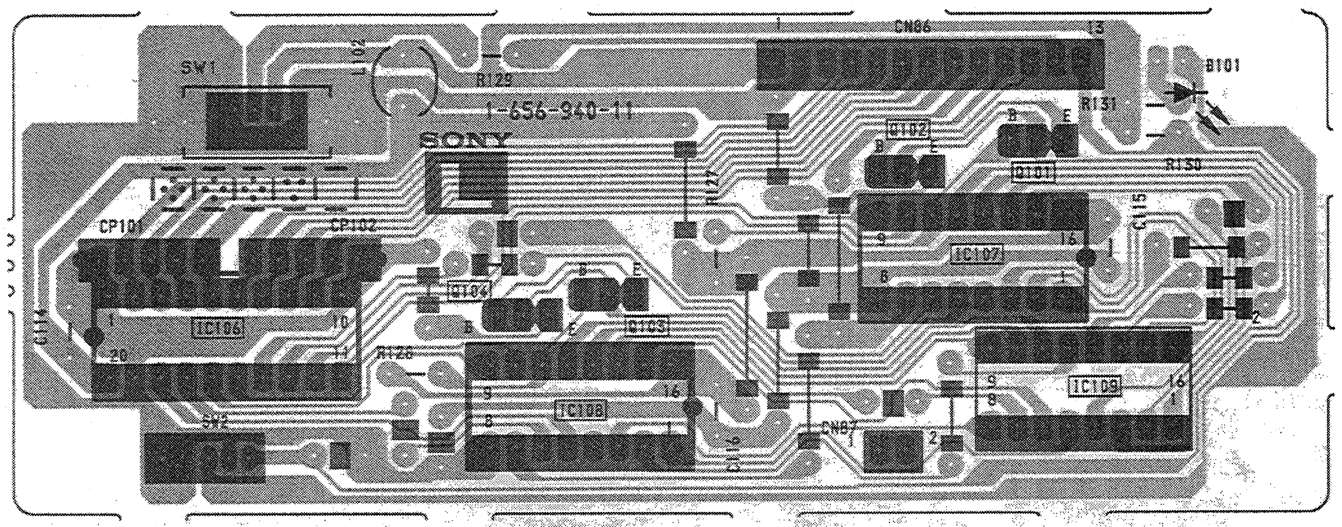
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

BC [SIGNAL SWITCH] **L** [ERROR CODE DISPLAY] **QM** [MOTHER]

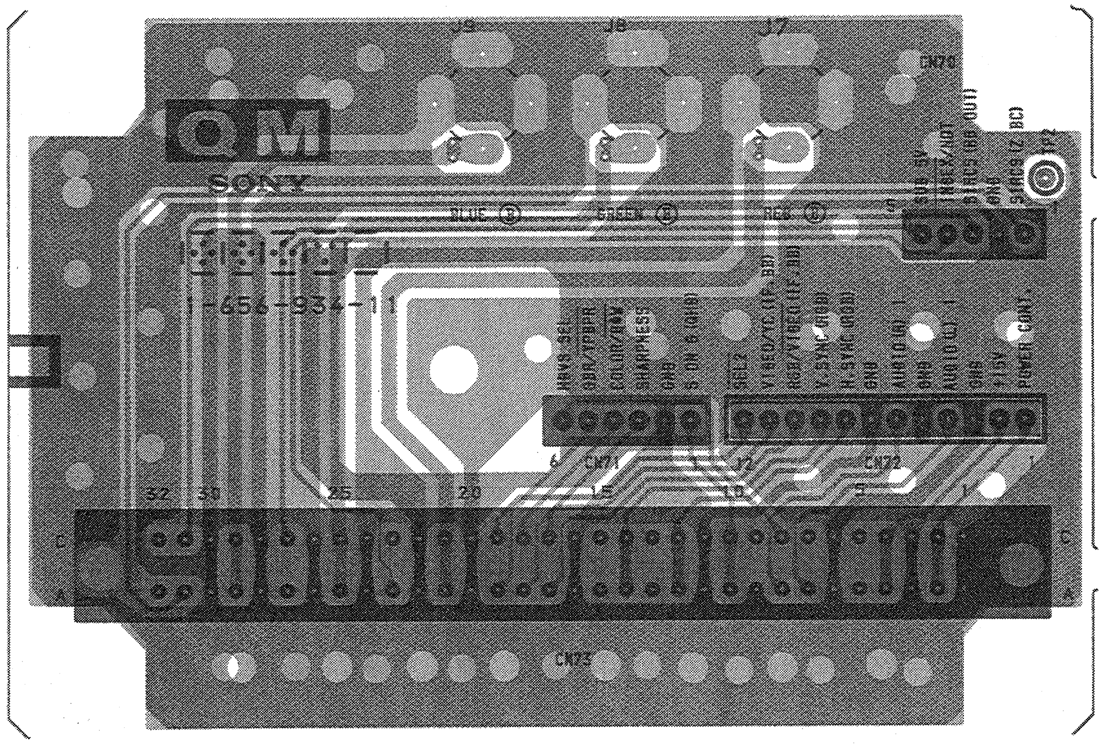
– BC BOARD –


CN74
BC
SONY
1-656-931-11
IC501
IC502
IC503
IC504
IC505
Q501
Q502
Q503
Q504
Q505
RY501
RY502
RY503

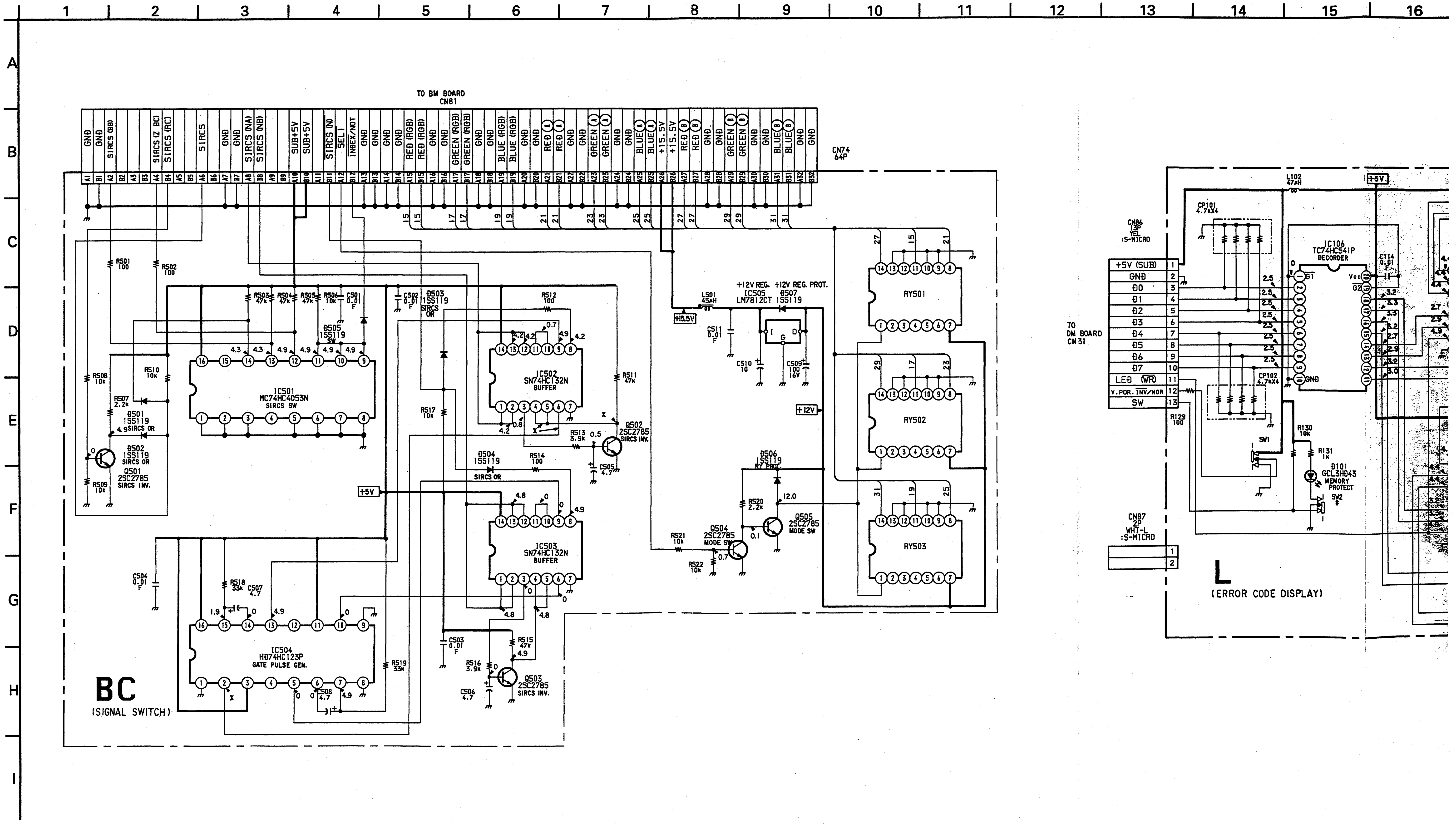
– L BOARD –

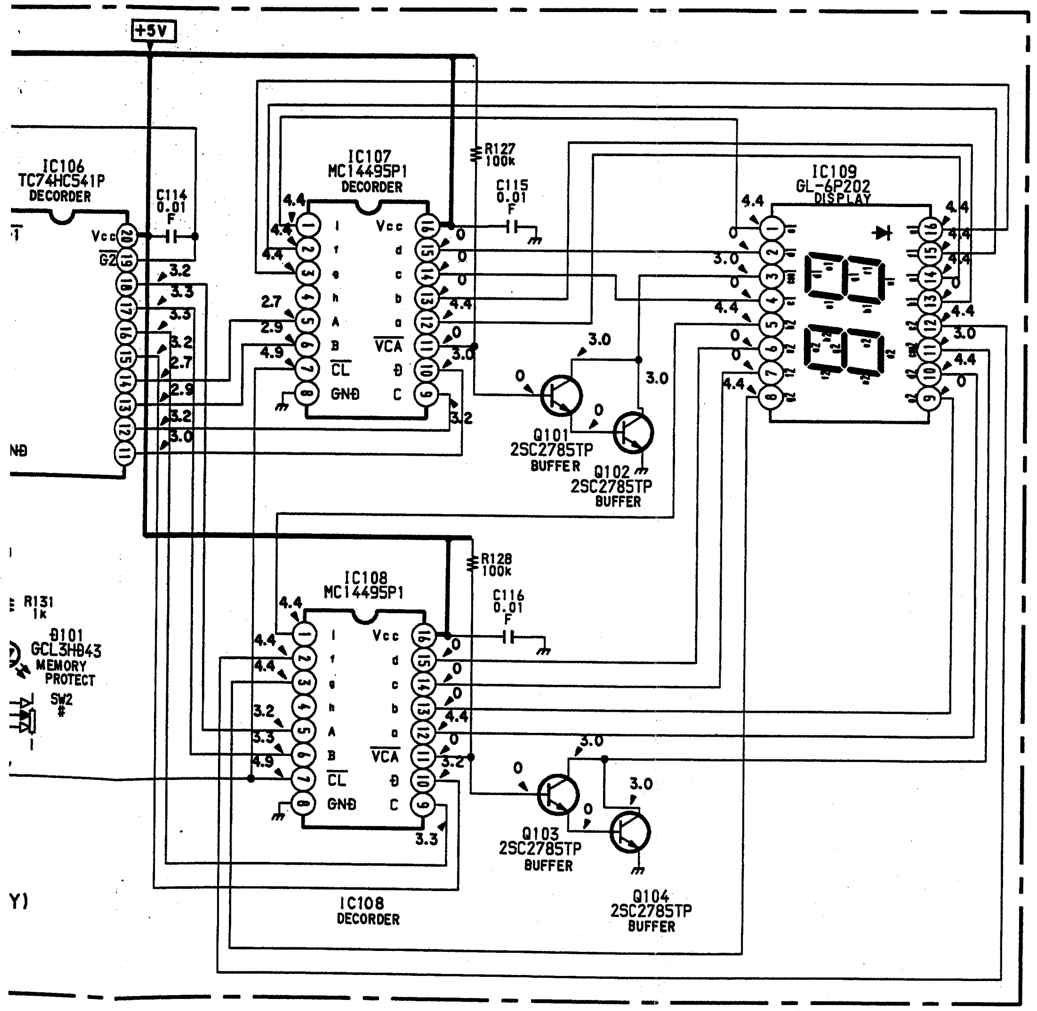

SW1
SW2
CN86
CN87
1-656-940-11
SONY
D101
IC106
IC107
IC108
IC109
Q101
Q102
Q103
Q104
CP101
CP102

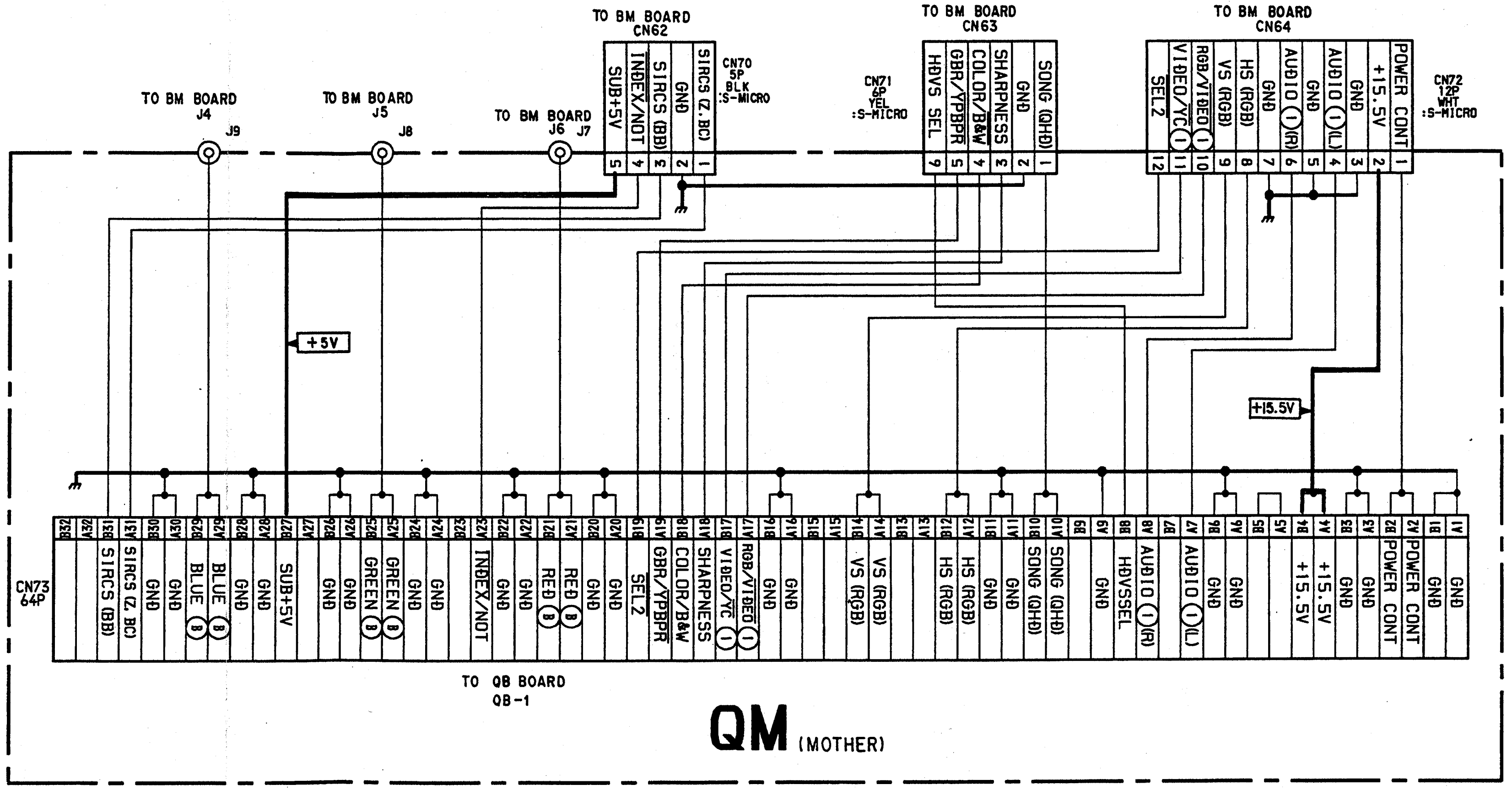
– QM BOARD –


J9
J8
J7
QM
SONY
1-656-934-11
BLUE
GREEN
RED
CN70
CN71
CN72
CN73

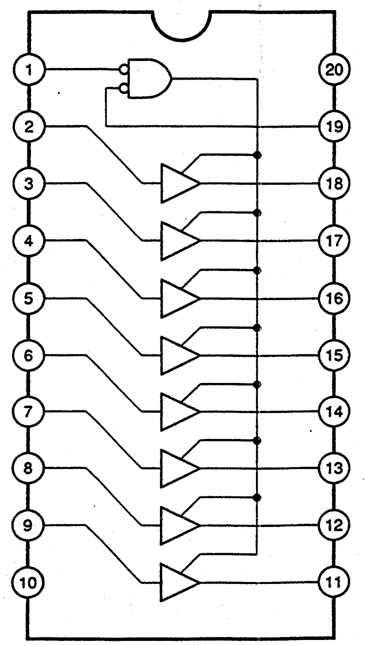
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.


TO BM BOARD CN81
CN74 64P
GND
SIRCS (BB)
SIRCS (Z BC)
SIRCS (RC)
SIRCS
SIRCS (NA)
SIRCS (NB)
SUB+5V
SIRCS (N)
SEL1
INDEX/NOT
RED (RGB)
GREEN (RGB)
BLUE (RGB)
RED (A)
GREEN (A)
BLUE (A)
+15.5V
RED (B)
GREEN (B)
BLUE (B)
R501 100
R502 100
R503 47k
R504 47k
R505 47k
R506 10k
C501 0.01 F
C502 0.01 F
D503 1SS119 SIRCS OR
D505 1SS119 SW
R512 100
IC501 MC74HC4053N SIRCS SW
IC502 SN74HC132N BUFFER
IC503 SN74HC132N BUFFER
IC504 HD74HC123P GATE PULSE GEN.
R507 2.2k
R508 10k
R509 10k
R510 10k
R511 47k
R513 3.9k
D501 1SS119 SIRCS OR
D502 1SS119 SIRCS OR
Q501 2SC2785 SIRCS INV.
Q502 2SC2785 SIRCS INV.
Q503 2SC2785 SIRCS INV.
R517 10k
D504 1SS119 SIRCS OR
R514 100
C505 4.7
C504 0.01 F
R518 33k
C507 4.7
R519 33k
C503 0.01 F
R515 47k
R516 3.9k
C506 4.7
C508 4.7
+5V
+15.5V
+12V
L501 45μH
C511 0.01 F
+12V REG. IC505 LM7812CT
+12V REG. PROT. D507 1SS119
C510 10
C509 100 16V
D506 1SS119 RY PROT.
R520 2.2k
R521 10k
R522 10k
Q504 2SC2785 MODE SW
Q505 2SC2785 MODE SW
RY501
RY502
RY503
BC
(SIGNAL SWITCH)
TO DM BOARD CN31
CN86 13P YEL :S-MICRO
+5V (SUB)
D0
D1
D2
D3
D4
D5
D6
D7
LED (WR)
V.POR. INV/NOR
SW
L102 47μH
CP101 4.7k×4
CP102 4.7k×4
IC106 TC74HC541P DECORDER
C114 0.01 F
R129 100
R130 10k
R131 1k
D101 GCL3HD43 MEMORY PROTECT
SW1
SW2
CN87 2P WHT-L :S-MICRO
L
(ERROR CODE DISPLAY)


+5V
IC106
TC74HC541P
DECORDER
C114
0.01
F
IC107
MC14495P1
DECORDER
R127
100k
C115
0.01
F
IC109
GL-6P202
DISPLAY
Q101
2SC2785TP
BUFFER
Q102
2SC2785TP
BUFFER
IC108
MC14495P1
R128
100k
C116
0.01
F
Q103
2SC2785TP
BUFFER
Q104
2SC2785TP
BUFFER
IC108
DECORDER
R131
1k
D101
GCL3HB43
MEMORY PROTECT
SW2
Vcc
GND
VCA
CL


TO BM BOARD
CN62
SUB+5V
INDEX/NOT
SIRCS (BB)
GND
SIRCS (Z.BC)
CN70
5P
BLK
:S-MICRO
TO BM BOARD
CN63
HDVS SEL
GBR/YPBPR
COLOR/B&W
SHARPNESS
GND
SONG (QHD)
CN71
6P
YEL
:S-MICRO
TO BM BOARD
CN64
SEL2
VIDEO/YC
RGB/VIDEO
VS (RGB)
HS (RGB)
GND
AUDIO (R)
AUDIO (L)
+15.5V
POWER CONT
CN72
12P
WHT
:S-MICRO
TO BM BOARD
J4
J9
TO BM BOARD
J5
J8
TO BM BOARD
J6
J7
+5V
+15.5V
CN73
64P
TO QB BOARD
QB-1
QM (MOTHER)

L BOARD IC106 TC74HC541P


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

DA [AFC/V. HOLD/WAVEFORM GENERATOR]

**DA BOARD
(COMPONENT SIDE)**

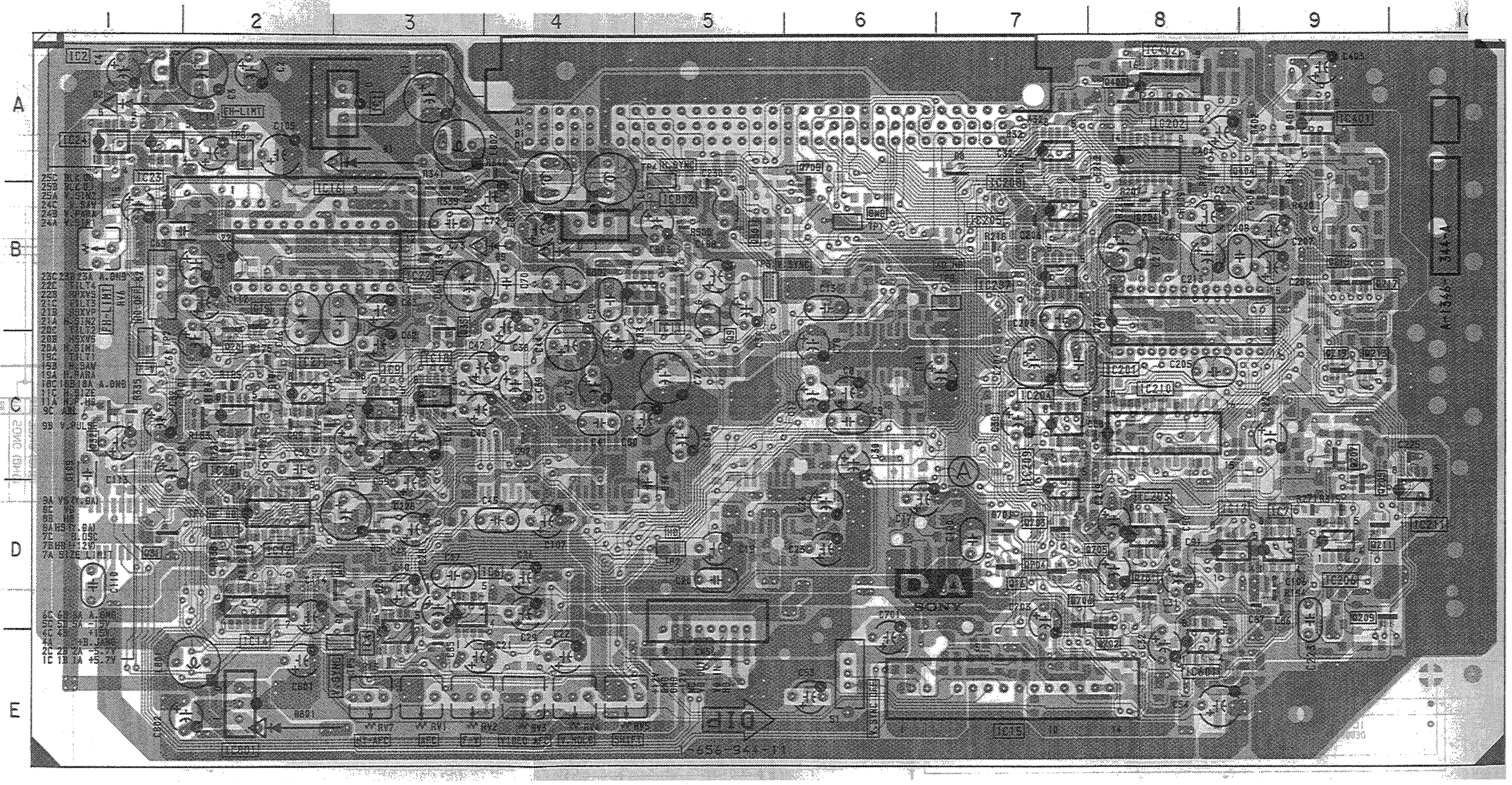
IC	
IC1	A-3
IC2	A-1
IC4	E-3
IC6	D-3
IC7	D-9
IC9	C-3
IC11	B-5
IC12	D-2
IC14	D-2
IC15	E-7
IC16	B-2
IC17	D-8
IC18	C-3
IC20	C-2
IC21	C-2
IC22	B-2
IC23	A-1
IC24	A-1
IC201	C-8
IC202	A-8
IC203	D-8
IC204	C-7
IC205	B-7
IC206	D-9
IC207	B-7
IC208	A-7
IC209	D-7
IC210	C-8
IC211	D-10
IC401	A-9
IC402	A-8
IC601	E-8
IC801	E-2
IC802	B-4

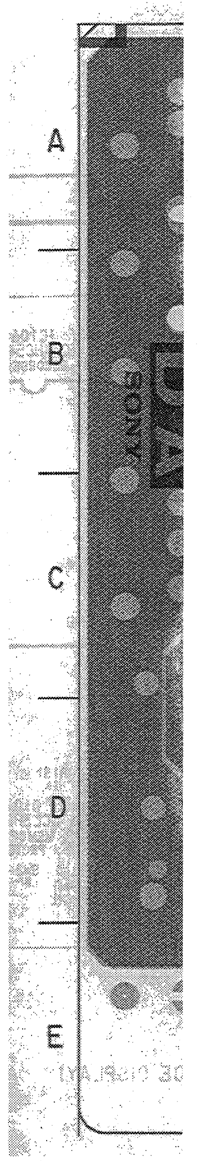
TRANSISTOR	
Q4	D-2
Q9	B-5
Q16	D-7
Q19	B-2
Q20	B-2
Q31	D-1
Q32	C-1
Q35	B-3
Q204	B-8
Q205	D-9
Q207	C-9
Q209	D-9
Q211	D-9
Q213	C-9
Q215	B-9
Q217	B-9
Q219	C-9
Q403	A-8
Q404	A-9
Q501	B-5
Q701	D-8
Q702	E-8
Q703	D-7
Q704	D-7
Q705	D-8
Q706	D-7
Q709	A-6

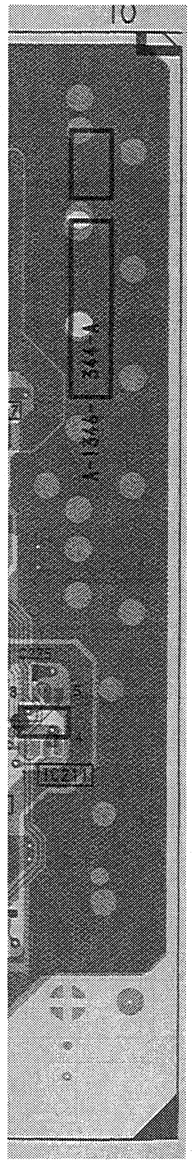
DIODE	
D1	A-3
D2	A-1
D3	D-3
D4	B-5
D5	D-3
D6	B-5
D9	B-4
D10	C-2
D20	D-3
D401	A-9
D402	A-9
D701	D-7
D801	E-2
D802	B-4

VARIABLE RESISTOR	
RV1	E-3
RV2	E-4
RV3	E-4
RV4	E-4
RV5	E-4
RV6	B-1
RV7	E-3

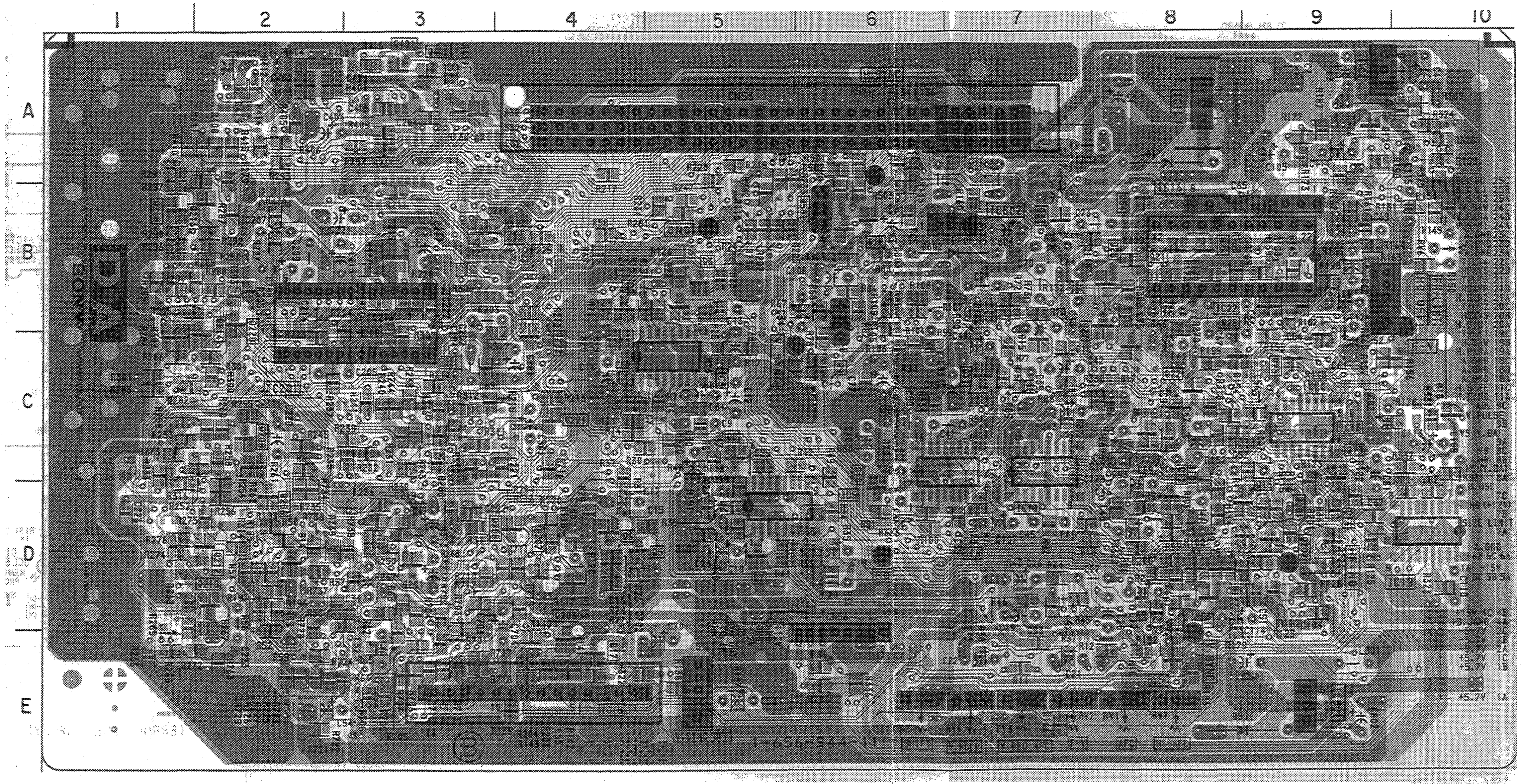
– DA BOARD – <Component Side>







<Conductor Side>



DA BOARD (CONDUCTOR SIDE)

IC	
IC1	A-8
IC2	A-9
IC3	C-5
IC5	D-5
IC8	C-7
IC10	C-7
IC13	C-9
IC15	E-4
IC16	B-8
IC19	D-10
IC22	B-8
IC201	C-2
IC801	E-9
IC802	B-7

TRANSISTOR	
Q1	D-8
Q2	B-4
D3	B-5
D5	D-5
D6	D-4
D7	D-5
D8	C-5
D9	B-6
D10	C-6
D11	C-7
D12	D-8
D13	C-9
D14	D-9
D15	D-9
D17	E-4
D18	B-6
D21	B-8
D22	C-8
D24	E-8
D25	C-9
D26	B-8
D27	C-8
D28	B-8
D29	C-8
D33	B-7
D34	B-8
D201	D-9
D202	D-9

D203	E-4
D206	D-2
D208	C-2
D210	D-2
D212	D-2
D214	C-2
D216	B-2
D218	B-1
D220	B-2
D221	C-4
D222	C-4
D401	A-3
D402	A-3
D501	B-6
D707	D-4
D708	D-4

DIODE	
D1	A-8
D2	A-9
D7	A-3
D9	B-7
D11	C-9
D12	A-9
D13	C-8
D14	D-2
D15	C-7
D16	C-7
D17	C-8
D18	C-10
D19	B-5
D201	D-3
D501	B-6
D801	E-9
D802	B-7

VARIABLE RESISTOR	
RV1	E-8
RV2	E-7
RV3	E-7
RV4	E-7
RV5	E-6
RV6	B-10
RV7	E-8

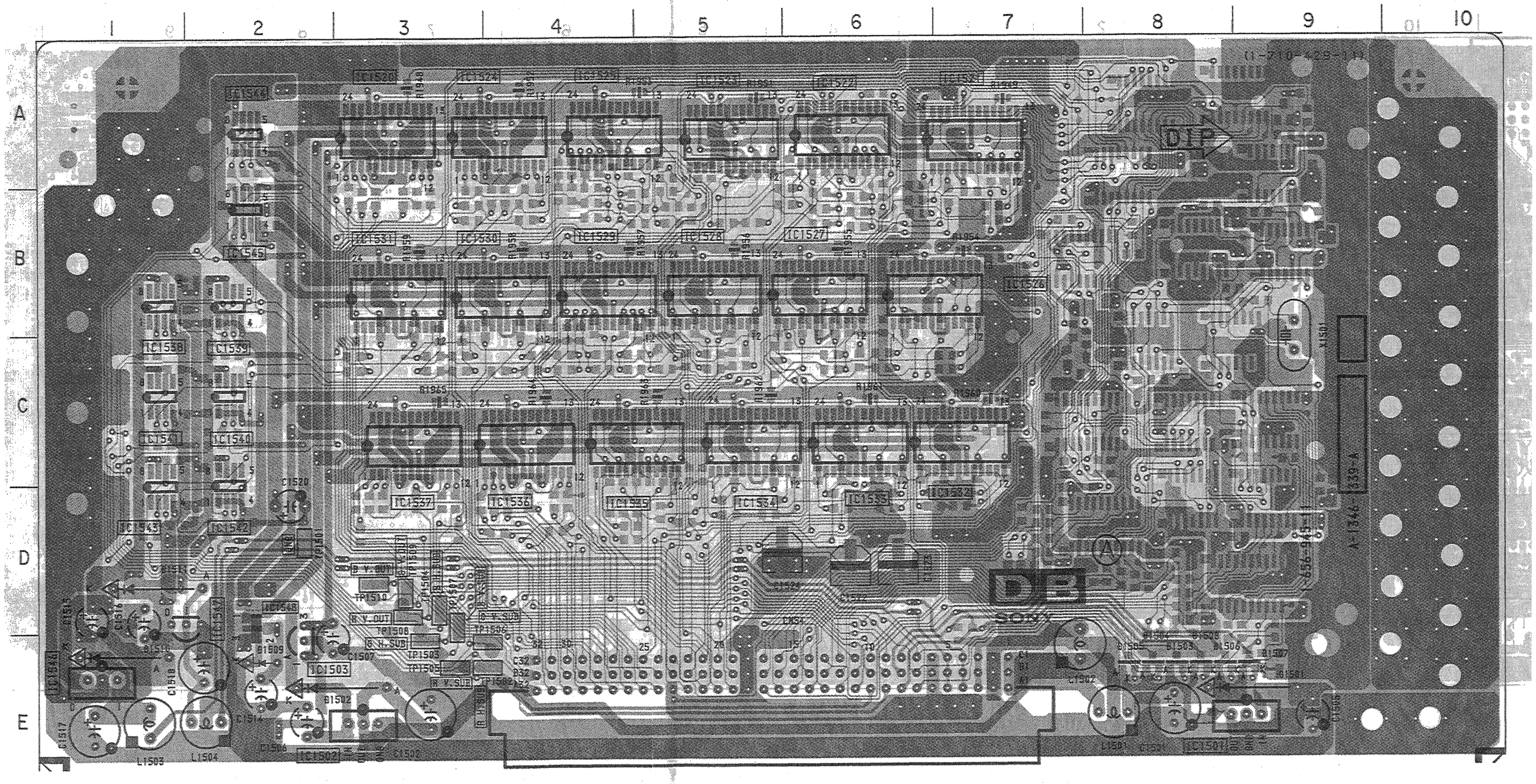
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

DB [ELECTRIC VOLUME]

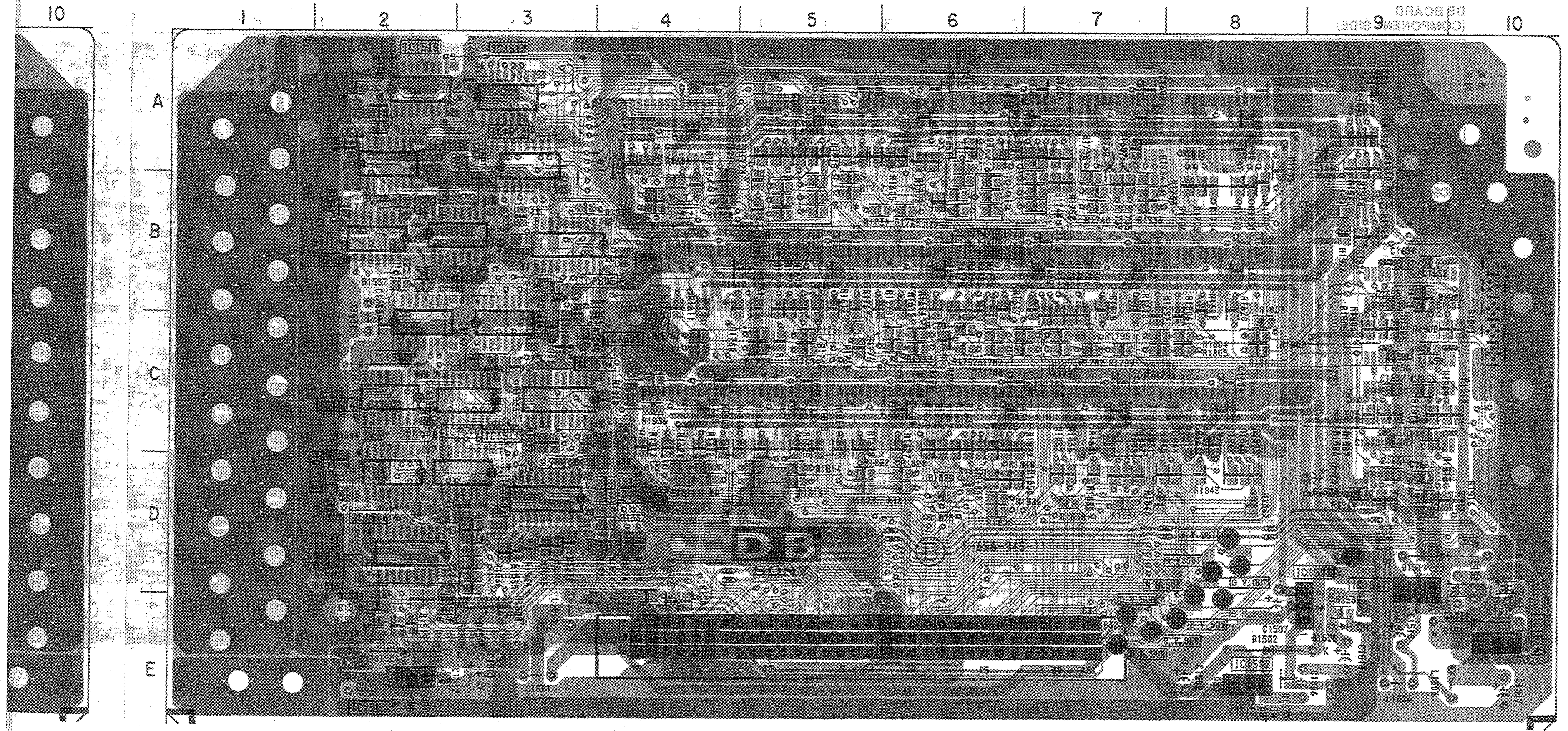
**DB BOARD
(COMPONENT SIDE)**

IC	
IC1501	E-8
IC1502	E-3
IC1503	E-2
IC1520	A-3
IC1521	A-7
IC1522	A-6
IC1523	A-5
IC1524	A-3
IC1525	A-4
IC1526	B-7
IC1527	B-6
IC1528	B-5
IC1529	B-4
IC1530	B-3
IC1531	B-3
IC1532	C-7
IC1533	C-6
IC1534	C-5
IC1535	C-4
IC1536	C-4
IC1537	C-3
IC1538	B-1
IC1539	B-2
IC1540	C-2
IC1541	C-1
IC1542	D-2
IC1543	D-1
IC1544	A-2
IC1545	B-2
IC1546	E-1
IC1547	D-2
IC1548	D-2
DIODE	
D1501	E-9
D1502	E-2
D1503	E-8
D1504	E-8
D1505	E-8
D1506	E-8
D1507	E-9
D1508	E-8
D1509	E-2
D1510	E-1
D1511	D-1

– DB BOARD – <Component Side>


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
(1-710-429-11)
DIP
DB
SONY
A-1346-339-A
1-656-945-11
X1501
IC1520
IC1524
IC1525
IC1523
IC1522
IC1521
IC1544
IC1545
IC1531
IC1530
IC1529
IC1528
IC1527
IC1526
IC1538
IC1539
IC1541
IC1540
IC1537
IC1536
IC1535
IC1534
IC1533
IC1532
IC1543
IC1542
IC1548
IC1547
IC1546
IC1503
IC1502
IC1501
CN1501
TP1510
TP1508
TP1505
TP1506
TP1503
TP1502
B V.OUT
R V.OUT
G H.SUB
R V.SUB
G V.SUB
C1520
C1507
C1502
C1501
L1503
L1504
L1501
D1501
D1502
D1503
D1504
D1505
D1506
D1507
D1508
D1509
D1510
D1511
R1965
R1962

<Conductor Side>


10
1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
DB
SONY
1-656-945-11
CN54

DB BO
(COND

IC15
IC15
IC15
IC15
IC15
IC15
IC15
IC15
IC15
IC15
IC15
IC15
IC15
IC15
IC15
IC15
IC15
IC15
IC15
IC15
IC15

D

D15
D15
D15
D15
D15
D19
D19

- ▨ : Pattern from the side which enables se
- ▨ : Pattern of the rear side.

VPH-1292Q/QM/QMG
RM-PJ1292

DE [ELECTRIC VOLUME, WAVEFORM GEN.]

DE BOARD
(COMPONENT SIDE)

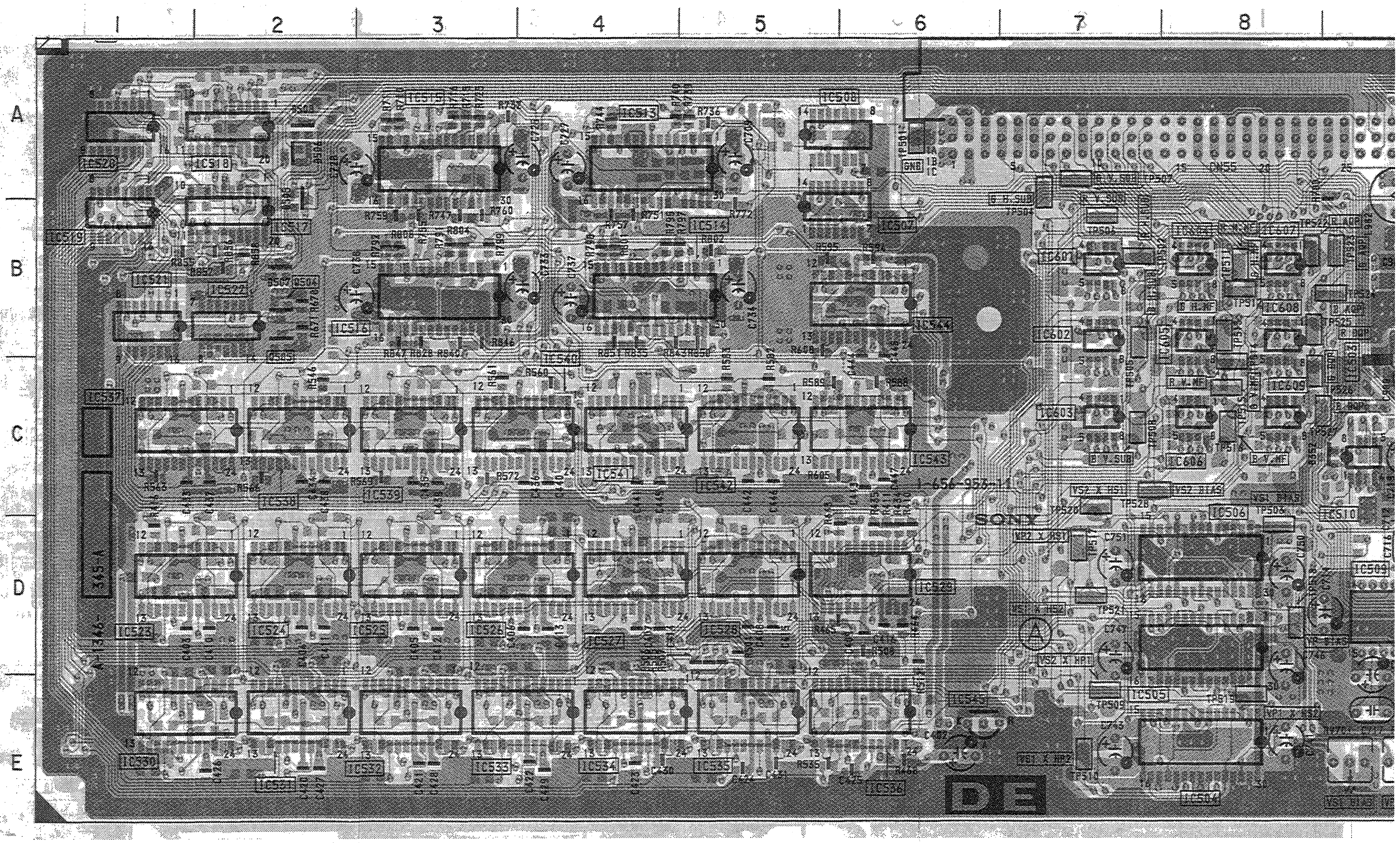
IC	
IC501	B-9
IC502	B-10
IC503	C-9
IC504	E-8
IC505	D-8
IC506	D-8
IC507	B-6
IC508	A-5
IC509	D-9
IC510	C-9
IC511	C-10
IC512	C-9
IC513	A-4
IC514	B-5
IC515	A-3
IC516	B-3
IC517	B-2
IC518	A-2
IC519	B-1
IC520	A-1
IC521	B-1
IC522	B-2
IC523	D-1
IC524	D-2
IC525	D-3
IC526	D-3
IC527	D-4
IC528	D-5
IC529	D-6
IC530	E-1
IC531	E-2
IC532	E-3
IC533	E-3
IC534	E-4
IC535	E-5
IC536	E-6
IC537	C-1
IC538	C-2
IC539	C-3
IC540	C-4
IC541	C-4
IC542	C-5
IC543	C-6
IC544	B-6
IC545	E-6
IC601	B-7
IC602	B-7
IC603	C-7
IC604	B-8
IC605	B-8
IC606	C-8
IC607	B-8
IC608	B-8
IC609	C-8

TRANSISTOR	
Q501	C-9
Q502	C-10
Q503	D-10
Q504	B-2
Q505	B-2

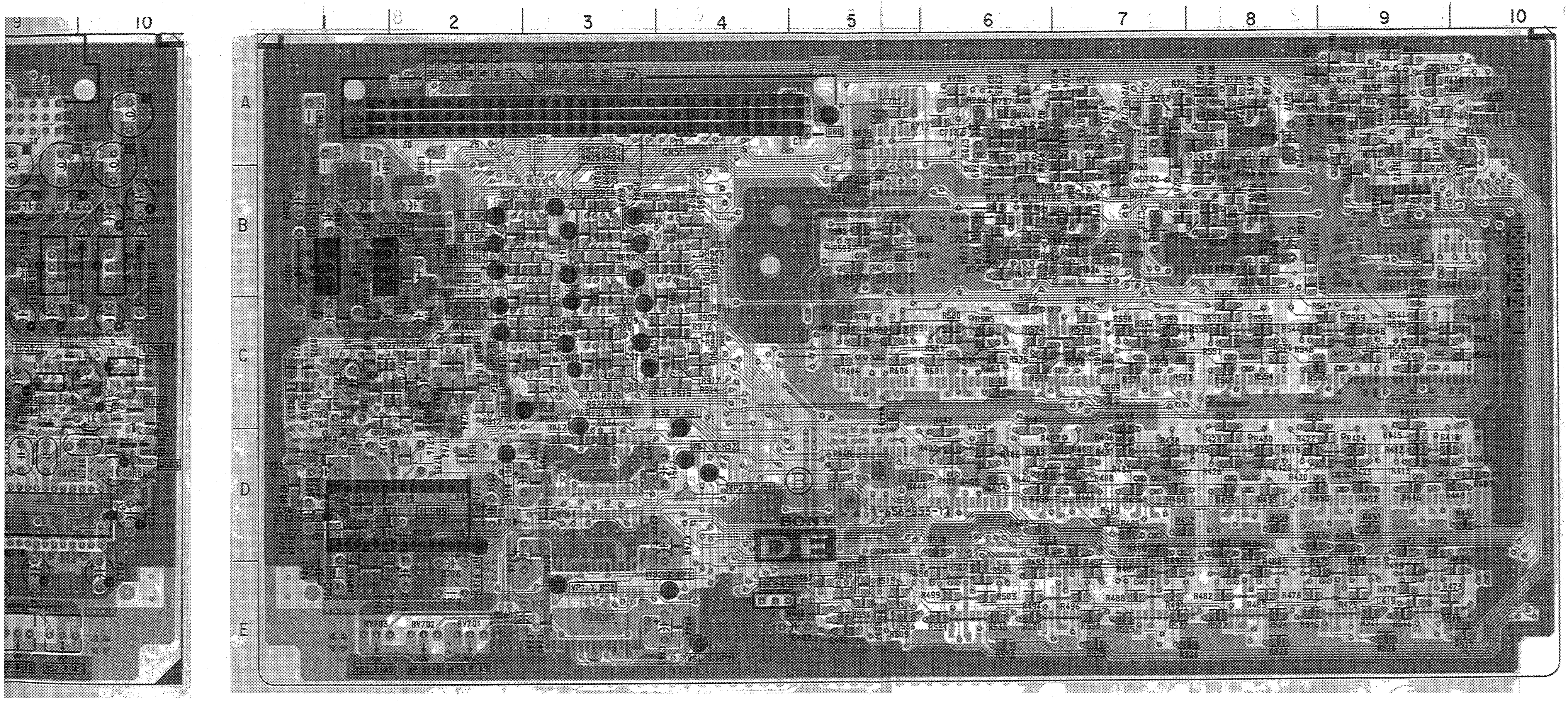
DIODE	
D352	C-9
D501	B-10
D502	B-10
D503	B-9
D505	A-2
D506	A-2
D507	B-2
D508	A-2

VARIABLE RESISTOR	
RV701	E-9
RV702	E-9
RV703	E-9

– DE BOARD – <Component Side>



<Conductor Side>


9
10
1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
SONY
DE
RV703
RV702
RV701

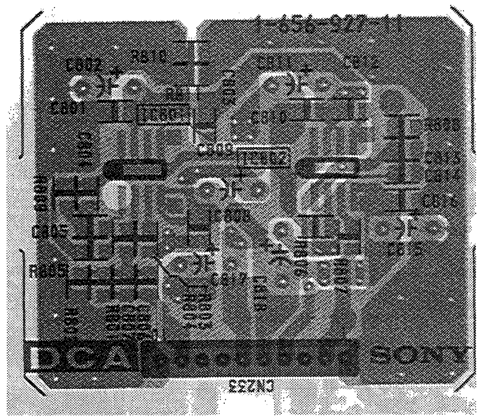
DE BOARD (CONDUCTOR SIDE)

IC	
IC501	B-1
IC502	B-1
IC509	D-2
IC545	E-4
DIODE	
D501	B-1
D502	B-1
D503	B-2
VARIABLE RESISTOR	
RV701	E-2
RV702	E-2
RV703	E-1

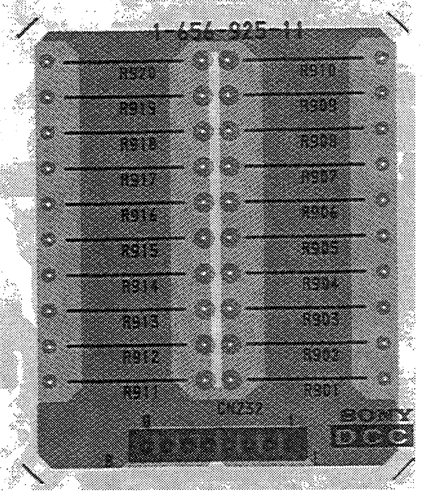
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

DCA [AMP] **DCC**

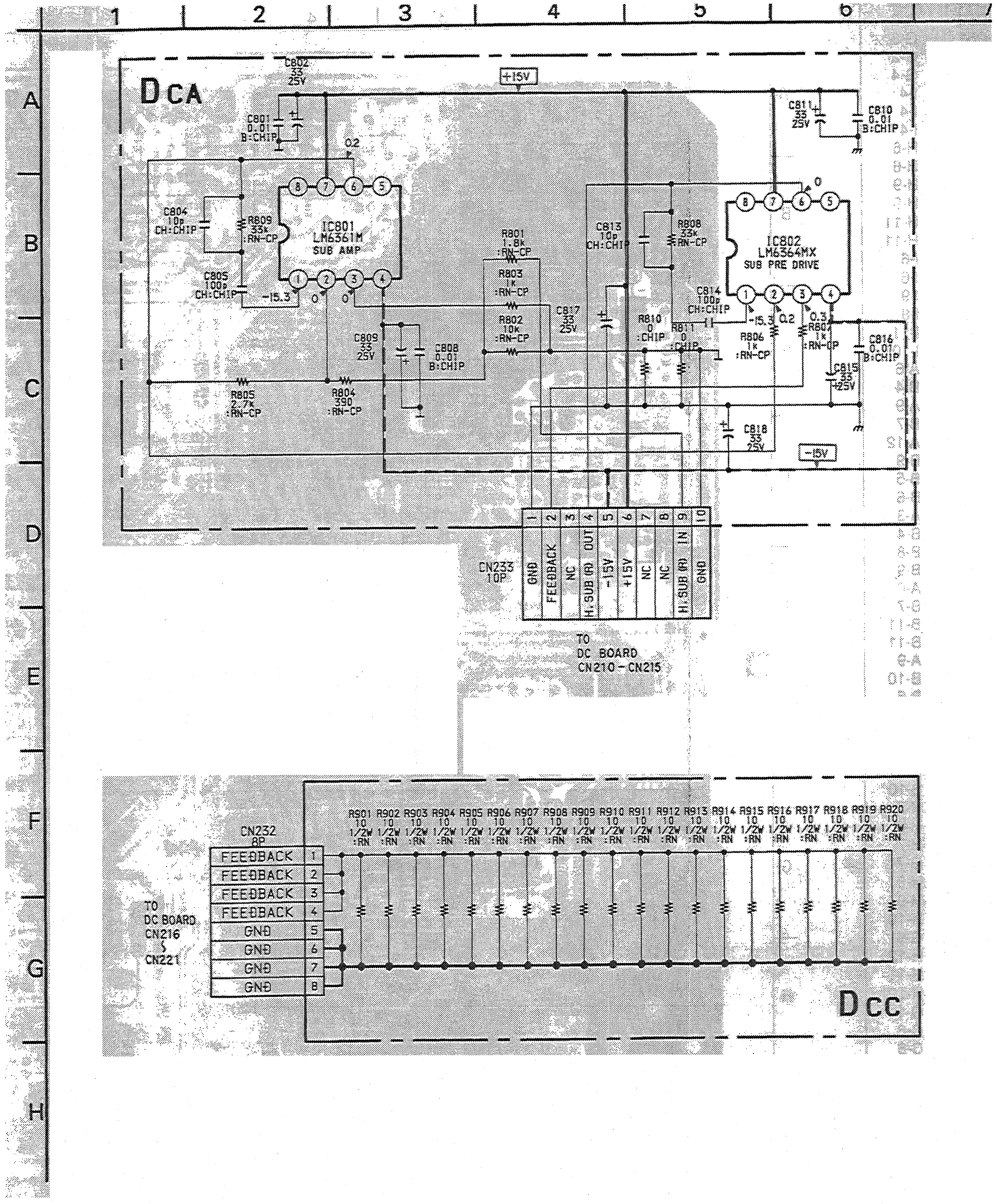
- DCA BOARD -


1-656-927-11
C802
R810
C811
C812
C801
C806
C810
C809
IC802
R808
C813
C814
C816
C815
C805
R805
IC801
C817
C818
DCA
SONY
CN233

- DCC BOARD -


1-656-925-11
R920
R919
R910
R909
R918
R908
R917
R907
R916
R906
R915
R905
R914
R904
R913
R903
R912
R902
R911
R901
CN232
SONY
DCC

- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.


1
2
3
4
5
6
A
B
C
D
E
F
G
H
DCA
+15V
C802 33 25V
C801 0.01 B:CHIP
0.2
C804 10p CH:CHIP
R809 33k :RN-CP
IC801 LM6361M SUB AMP
C805 100p CH:CHIP
-15.3
0
R801 1.8k :RN-CP
R803 1k :RN-CP
R802 10k :RN-CP
C809 33 25V
C808 0.01 B:CHIP
R805 2.7k :RN-CP
R804 390 :RN-CP
C813 10p CH:CHIP
R808 33k :RN-CP
C817 33 25V
R810 0 :CHIP
R811 0 :CHIP
C811 33 25V
C810 0.01 B:CHIP
IC802 LM6364MX SUB PRE DRIVE
C814 100p CH:CHIP
-15.3
0.2
0.3
R807 1k :RN-CP
R806 1k :RN-CP
C816 0.01 B:CHIP
C815 33 25V
C818 33 25V
-15V
CN233 10P
1 GND
2 FEEDBACK
3 NC
4 H.SUB (R) OUT
5 -15V
6 +15V
7 NC
8 NC
9 H.SUB (R) IN
10 GND
TO DC BOARD CN210 - CN215
CN232 8P
1 FEEDBACK
2 FEEDBACK
3 FEEDBACK
4 FEEDBACK
5 GND
6 GND
7 GND
8 GND
TO DC BOARD CN216 ~ CN221
R901 R902 R903 R904 R905 R906 R907 R908 R909 R910 R911 R912 R913 R914 R915 R916 R917 R918 R919 R920
10 1/2W :RN
DCC

DC BOARD

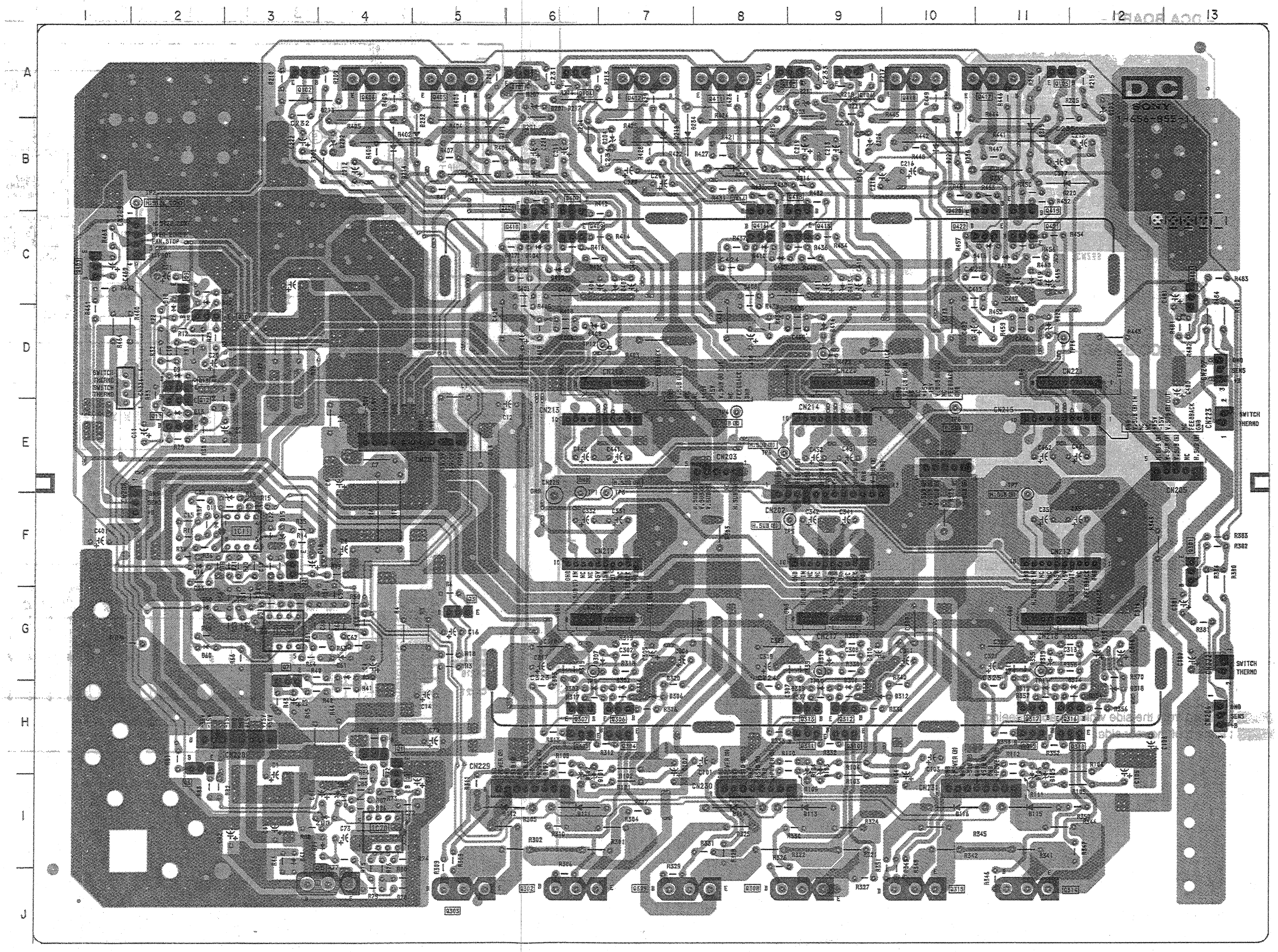
IC	
IC11	F-3
IC50	G-3
IC70	I-4
TRANSISTOR	
Q1	H-4
Q2	F-3
Q3	G-5
Q4	H-4
Q5	J-4
Q6	H-2
Q7	G-3
Q9	C-2
Q10	D-2
Q11	E-2
Q12	D-2
Q13	D-2
Q101	A-6
Q102	A-3
Q103	A-8
Q104	A-6
Q105	A-11
Q106	A-9
Q301	F-13
Q302	J-6
Q303	J-5
Q304	H-7
Q305	H-6
Q306	H-7
Q307	H-6
Q308	J-9
Q309	J-7
Q310	H-9
Q311	H-9
Q312	H-9
Q313	H-9
Q314	J-11
Q315	J-10
Q316	H-11
Q317	H-11
Q318	H-11
Q319	H-11
Q401	C-13
Q403	C-1
Q405	A-5
Q406	A-4
Q407	B-6
Q408	B-6
Q409	C-6
Q410	C-6
Q411	A-8
Q412	A-7
Q413	B-9
Q414	B-8
Q415	C9
Q416	C8
Q417	A11
Q418	A-10
Q419	B-11
Q420	B-11
Q421	C-11
Q422	C-11
DIODE	
D5	G-4
D8	D-2
D9	D-2
D10	C-2
D11	F-2
D12	C-2
D13	E-2
D14	F-3
D15	F-3
D16	F-2
D41	I-3
D50	G-2
D51	G-3
D60	G-2
D61	G-4
D71	I-4
D81	I-4
D82	I-4
D101	H-6
D102	H-6
D103	H-9
D104	H-9
D105	H-11
D106	H-11
D111	I-6
D112	I-6
D113	I-9
D114	I-8
D115	I-11
D116	I-10
D201	A-6
D202	B-4
D203	A-9
D204	B-7
D205	A-12
D206	B-9
D211	B-5
D212	B-6
D213	A-3
D214	B-4
D215	B-8
D216	B-9
D217	A-6
D218	B-7
D219	B-11
D220	B-11
D221	A-9
D222	B-10
D231	B-5
D232	B-5
D233	B-8
D234	B-7
D235	B-11
D236	B-10
D302	H-7
D303	H-6
D306	H-7
D307	G-7
D308	H-9
D309	H-9
D312	H-10
D313	G-9
D314	H-12
D315	H-11
D318	H-12
D319	G-11
D403	C-6
D404	C-6
D407	C-7
D408	D-6
D409	C-8
D410	C-8
D413	C-9
D414	D-9
D415	C-11
D416	C-11
D419	C-11
D420	D-11

Schematic diagrams
← DCA, DCC boards

DC [SUB DY DRIVER]

- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

– DC BOARD –

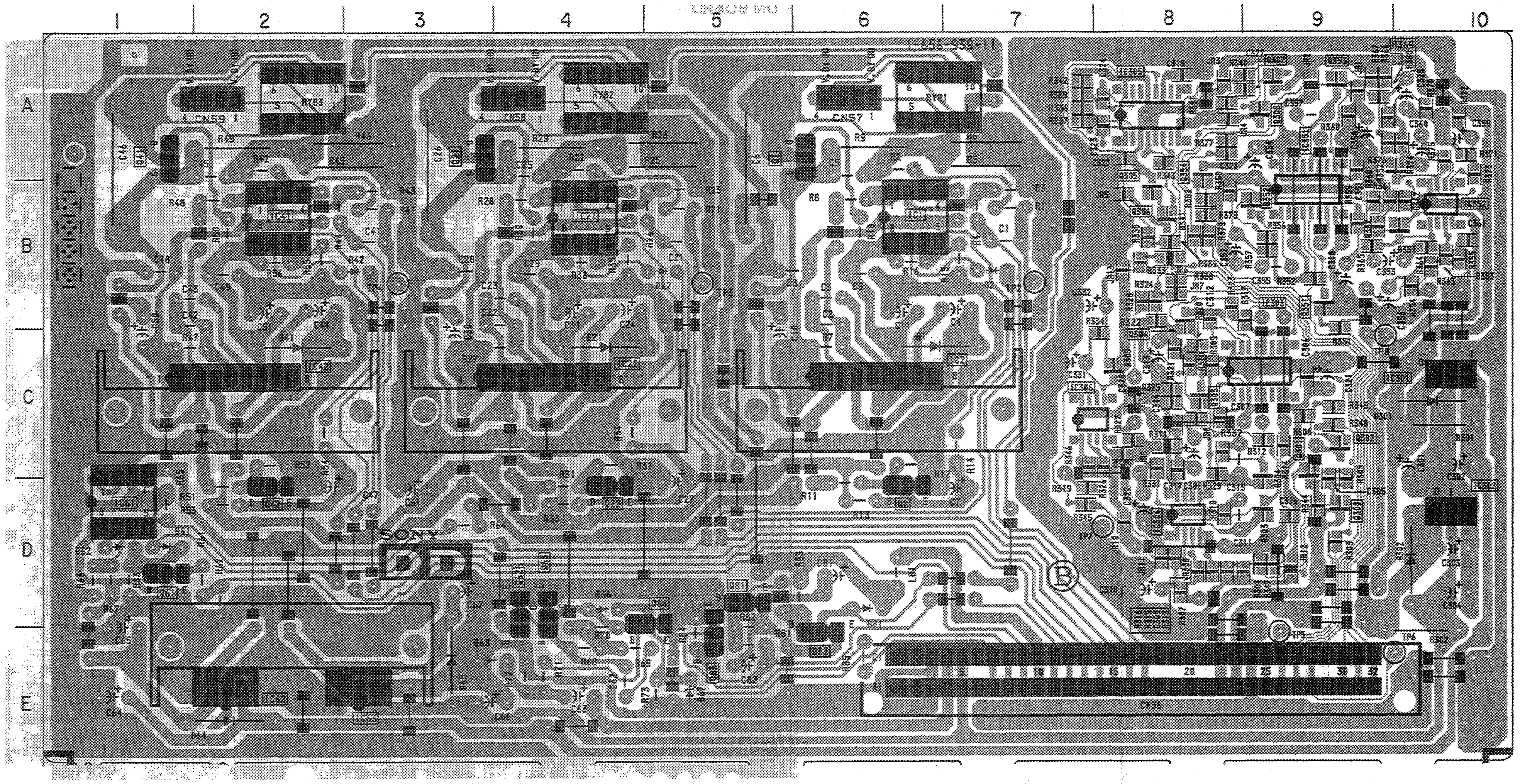


DD [V. DY DRIVER]

DD BOARD

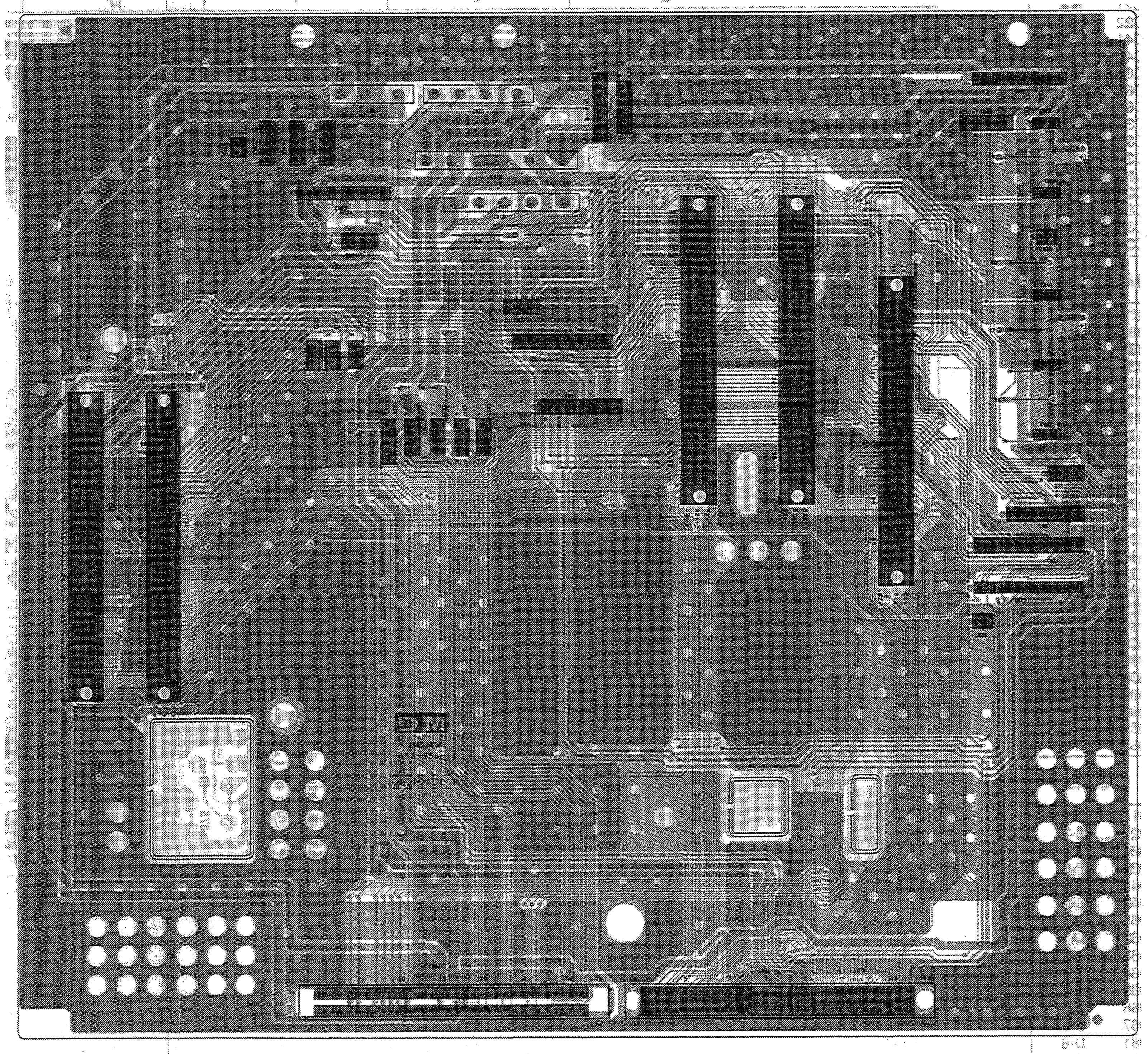
IC	
IC1	B-6
IC2	C-6
IC21	B-4
IC22	C-4
IC41	B-2
IC42	C-2
IC61	D-1
IC62	E-2
IC63	E-3
IC301	C-10
IC302	D-10
IC303	C-9
IC304	D-8
IC305	A-8
IC306	C-7
IC351	B-9
IC352	B-10
TRANSISTOR	
Q1	A-6
Q2	D-6
Q21	A-3
Q22	D-4
Q41	A-1
Q42	D-2
Q61	D-1
Q62	D-4
Q63	D-4
Q64	D-5
Q81	D-5
Q82	E-6
Q83	E-5
Q300	D-9
Q301	C-9
Q302	C-9
Q303	C-8
Q304	C-8
Q305	B-8
Q306	B-8
Q307	A-9
Q308	A-9
Q351	B-9
Q352	B-9
Q353	A-9
Q354	A-8
DIODE	
D1	C-6
D2	B-7
D21	C-4
D22	B-5
D41	C-2
D42	B-3
D61	D-1
D62	D-1
D63	E-3
D64	E-2
D65	E-3
D66	D-4
D67	E-5
D81	D-6
D301	C-10
D302	D-10
D303	D-9
D304	D-9
D305	C-8
D351	B-10
D352	A-9

– DD BOARD –


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
1-656-939-11
CN59
CN58
CN57
RY83
RY82
RY81
IC41
IC21
IC1
IC42
IC22
IC2
IC61
IC62
IC63
SONY
DD
CN56
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
B

DM [MOTHER]

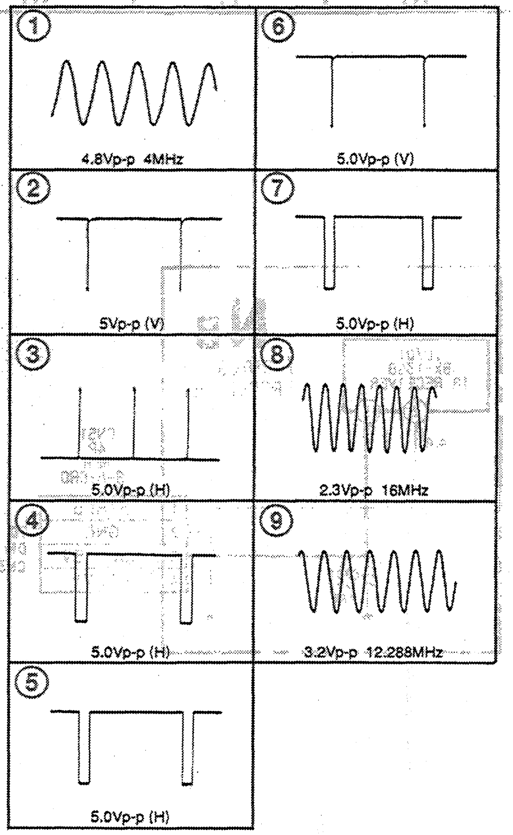
– DM BOARD –



- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

Y [CPU MEMORY]

Y BOARD



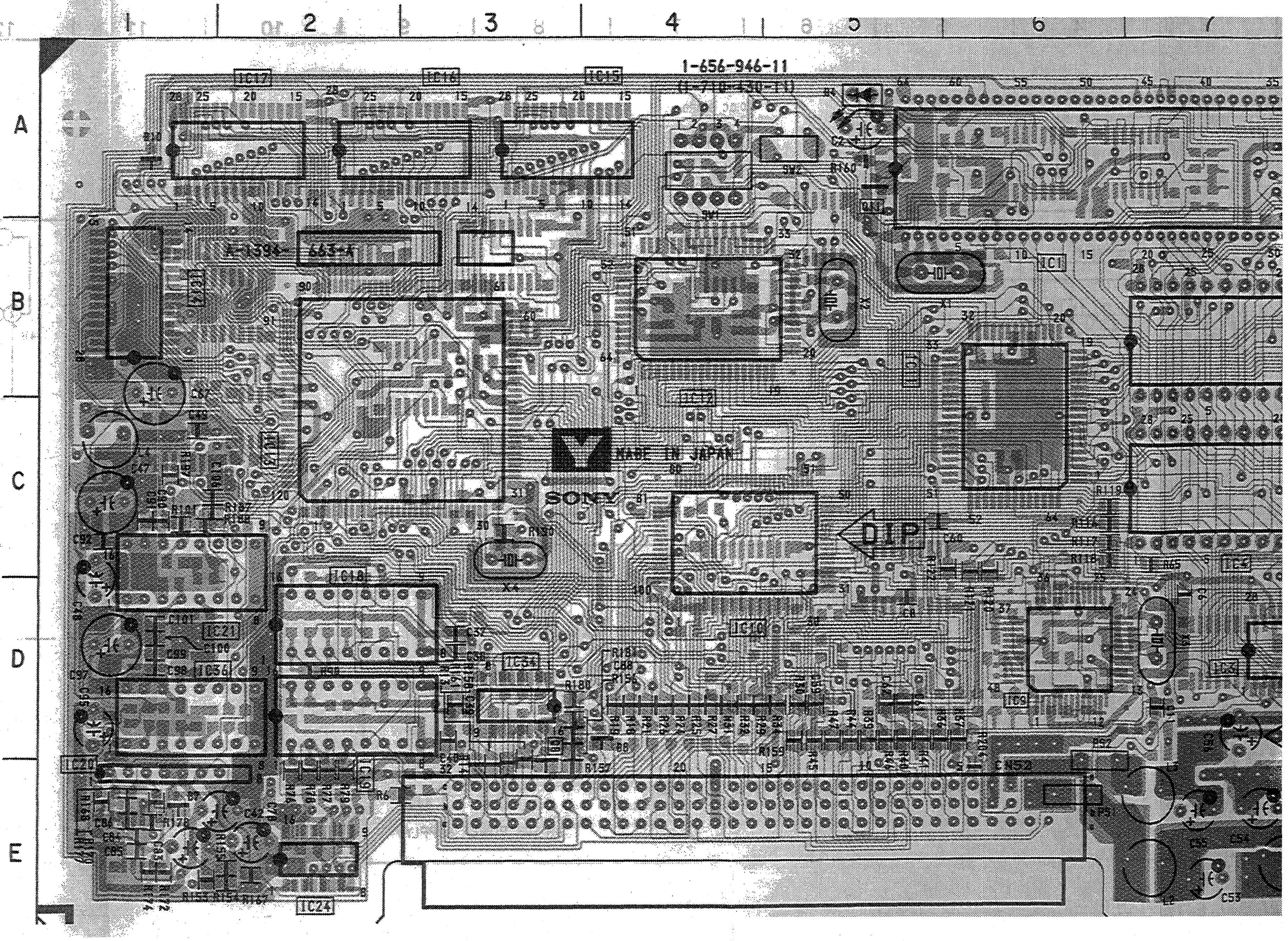
Y BOARD (COMPONENT SIDE)

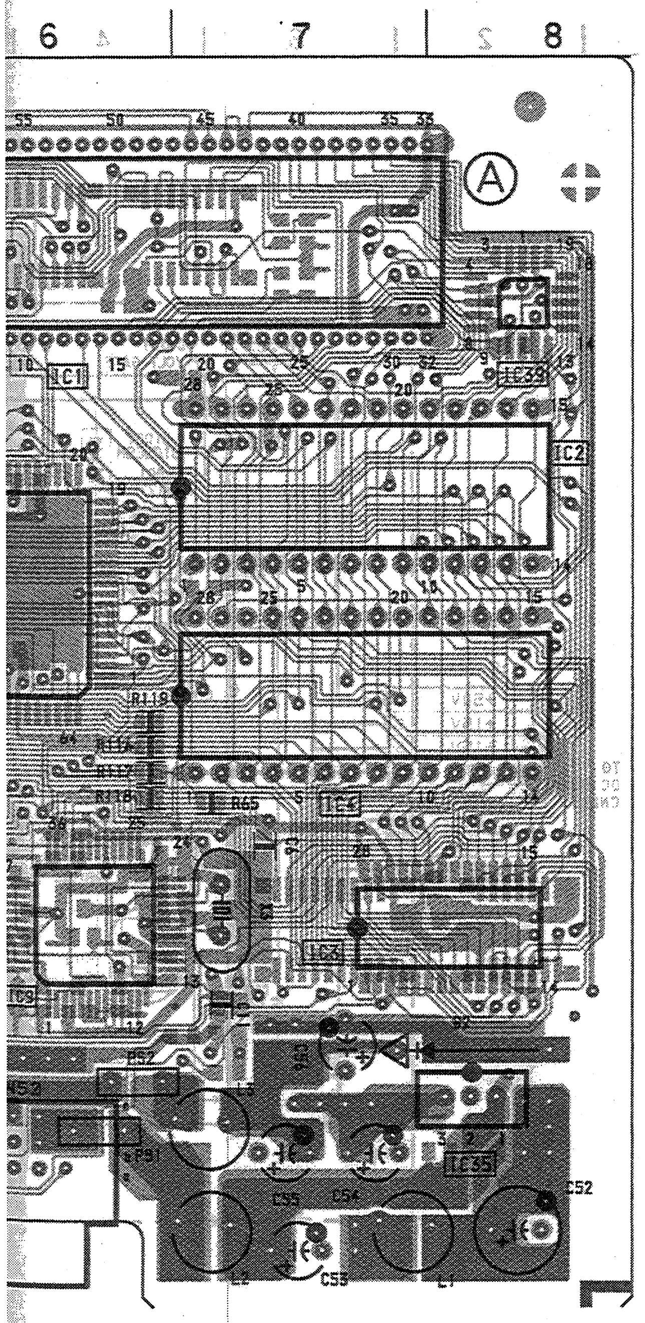
IC	
IC1	A-6
IC2	B-7
IC3	D-7
IC4	C-7
IC9	D-6
IC10	D-4
IC11	C-6
IC12	B-4
IC13	C-2
IC14	A-1
IC15	A-4
IC16	A-3
IC17	A-2
IC18	D-2
IC19	D-2
IC20	E-1
IC21	D-1
IC24	E-2
IC34	D-3
IC35	E-8
IC36	D-1
IC39	B-8

TRANSISTOR	
Q8	D-3
Q11	A-5

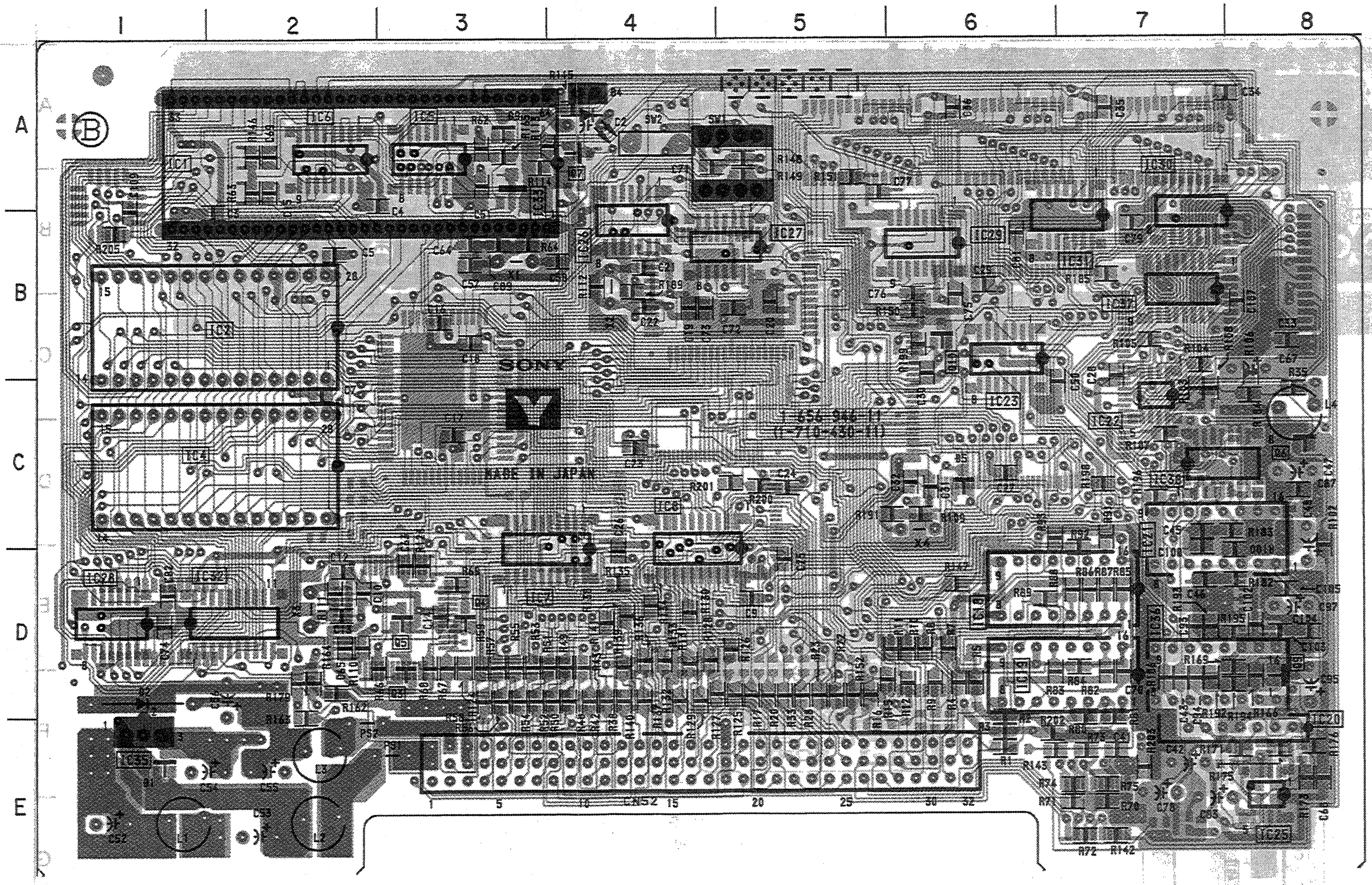
DIODE	
D2	D-8
D4	A-5
D7	E-1
D8	D-4
D10	A-1

– Y BOARD – <Component Side>


1
2
3
4
5
6
A
B
C
D
E
1-656-946-11
(1-710-430-11)
IC17
IC16
IC15
IC1
IC18
IC10
IC34
IC20
IC24
IC21
IC36
IC9
IC4
MADE IN JAPAN
SONY
DIP
CN52


6
7
8
Ⓐ
IC1
IC2
IC39
IC4
IC35
CN52
C52
C53
C54
C55

<Conductor Side>


1
2
3
4
5
6
7
8
A
B
C
D
E
Ⓑ
SONY
Y
MADE IN JAPAN
1-656-946-11
(1-710-430-11)
CN52
IC1
IC2
IC4
IC6
IC26
IC27
IC29
IC31
IC23
IC22
IC30
IC38
IC28
IC32
IC18
IC19
IC36
IC20
IC25
IC35
SW1
SW2

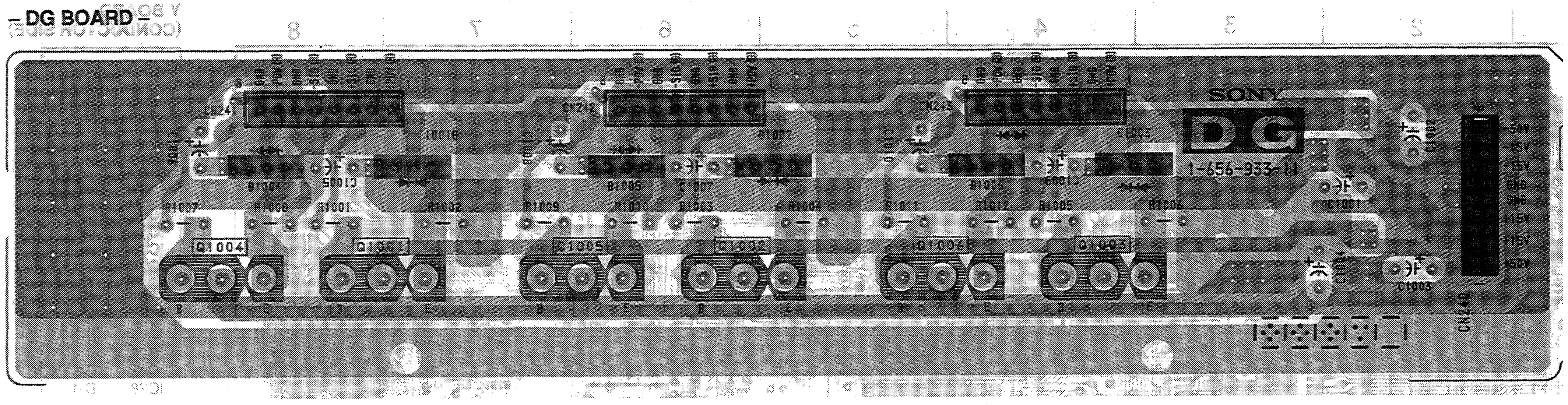
Y BOARD (CONDUCTOR SIDE)

IC	
IC1	A-2
IC2	B-1
IC4	C-1
IC5	A-3
IC6	A-2
IC7	D-3
IC8	D-4
IC18	D-6
IC19	D-6
IC20	E-8
IC21	C-7
IC22	C-7
IC23	B-6
IC25	E-8
IC26	B-4
IC27	B-5
IC28	D-1
IC29	B-6
IC30	A-7
IC31	B-7
IC32	D-1
IC33	A-3
IC35	E-1
IC36	D-7
IC37	B-7
IC38	C-7
TRANSISTOR	
Q3	D-3
Q4	D-3
Q5	D-3
Q6	C-8
Q7	A-4
Q9	D-8
Q10	B-6
DIODE	
D2	D-1
D4	A-4
D5	C-6
D9	A-3

- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

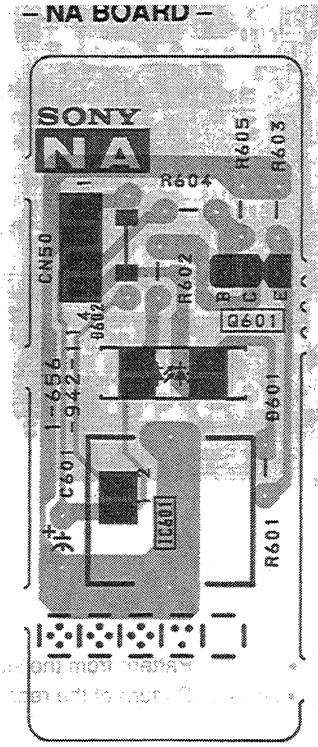
DG [H. SUB POWER SUPPLY] **NA** [RECEIVER] **NB** [SIRCS RECEIVER]

– DG BOARD –

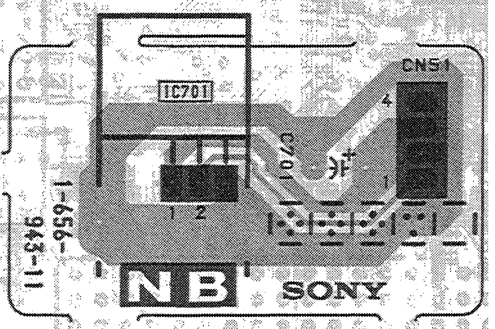

8
7
6
5
4
3
2
CN241
CN242
CN243
CN240
SONY
DG
1-656-933-11
D1004
D1005
D1006
C1001
C1002
C1003
C1004
C1007
D1001
D1002
D1003
R1001
R1002
R1003
R1004
R1005
R1006
R1007
R1008
R1009
R1010
R1011
R1012
Q1001
Q1002
Q1003
Q1004
Q1005
Q1006
B
E
-50V
-15V
-15V
GND
GND
+15V
+15V
+50V

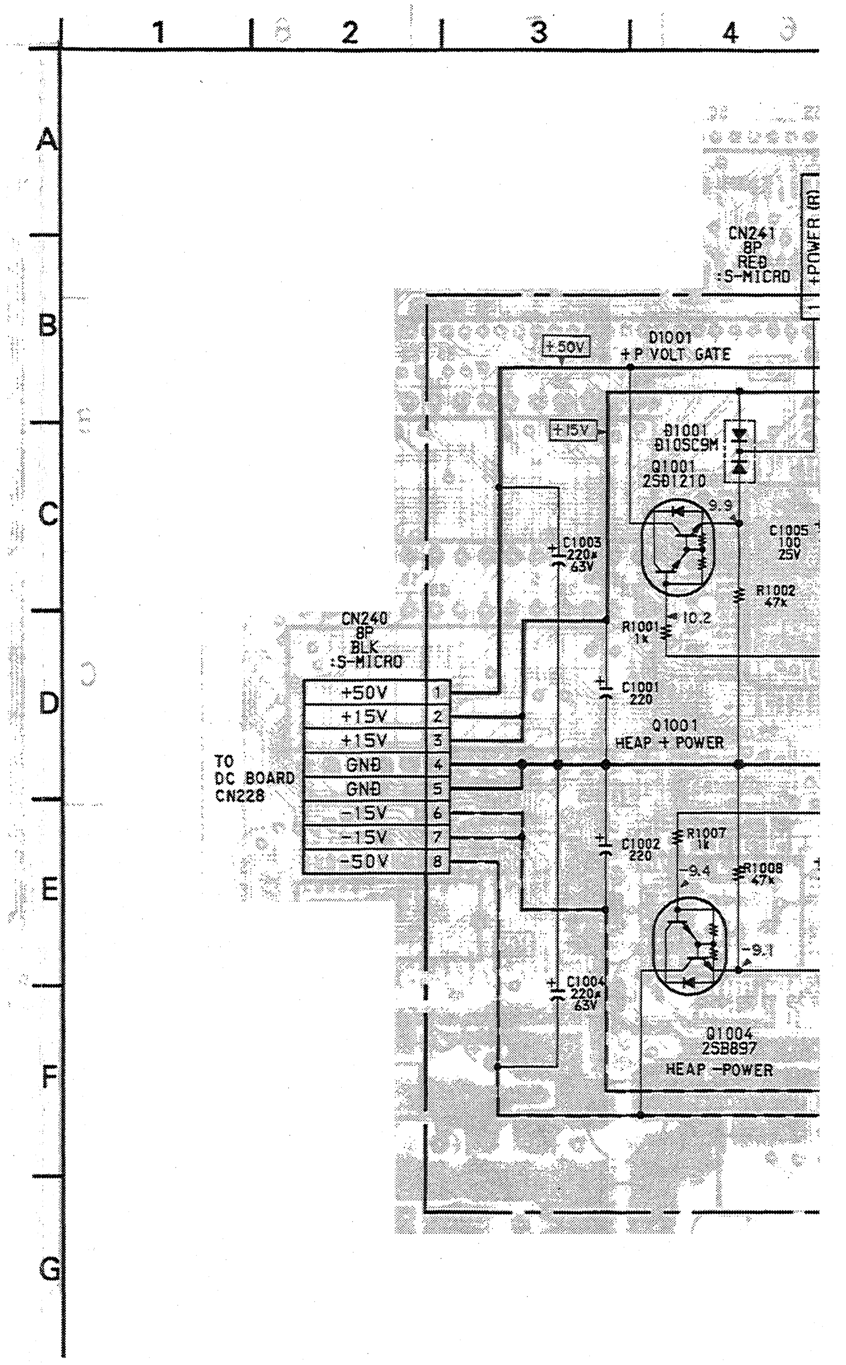
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

– NA BOARD –


SONY
NA
R604
R605
R603
CN50
R602
D602
Q601
B
C
E
D601
1-656-942-11
C601
IC601
R601

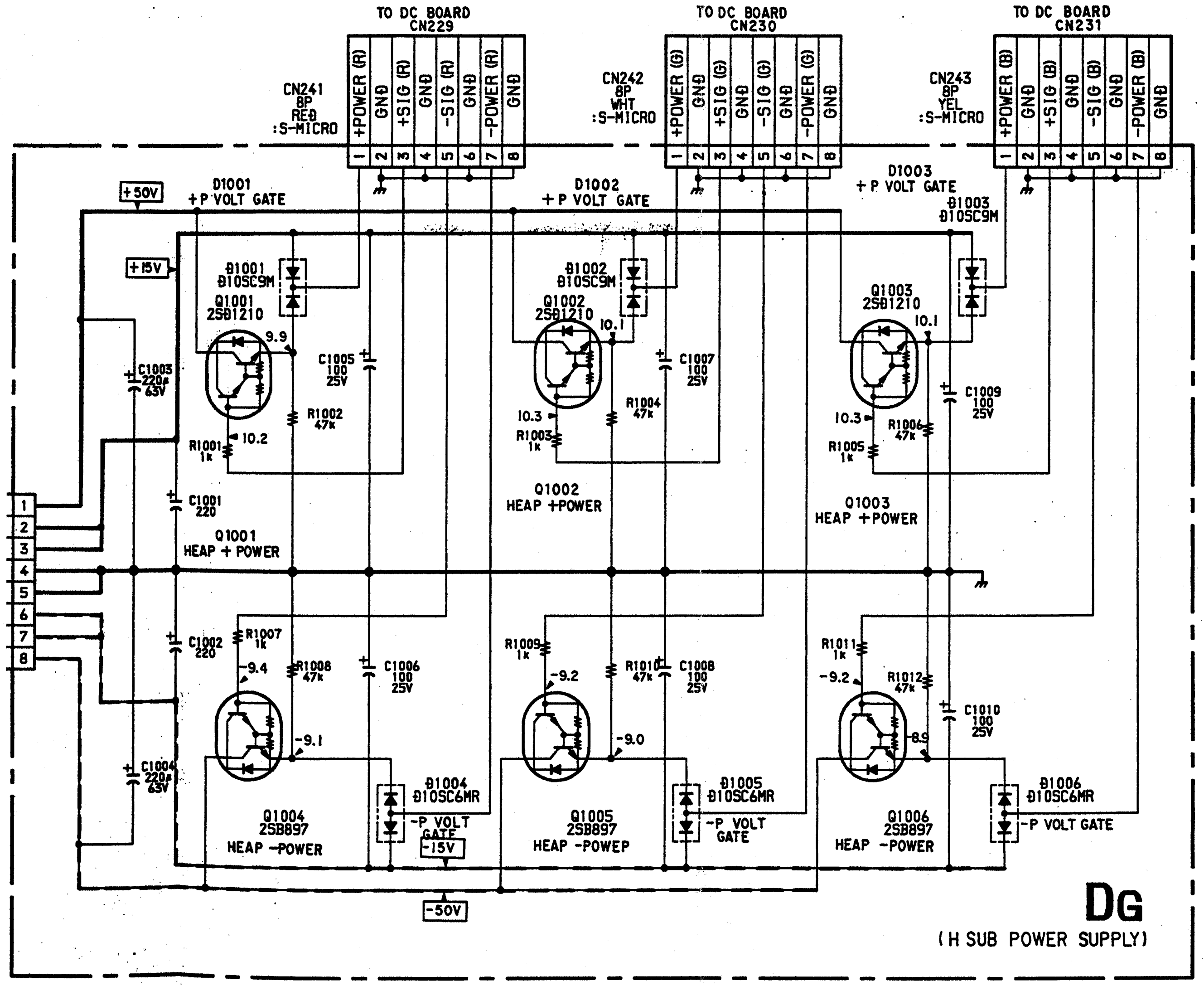
– NB BOARD –

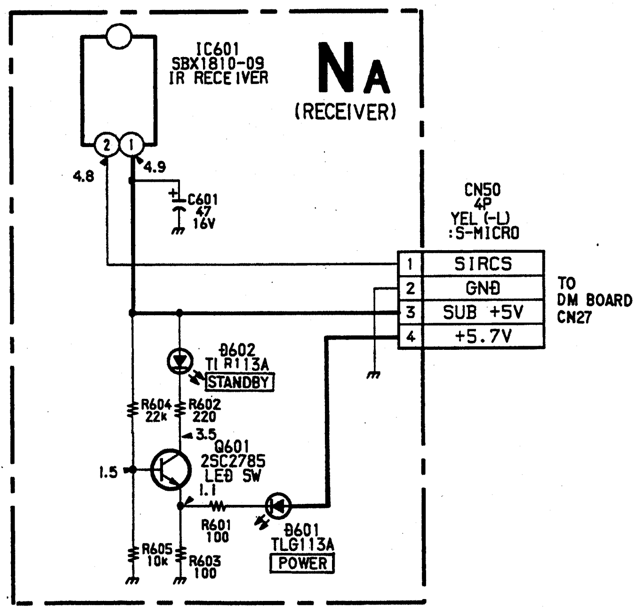

IC701
CN51
4
1
C701
1
2
1-656-943-11
NB
SONY

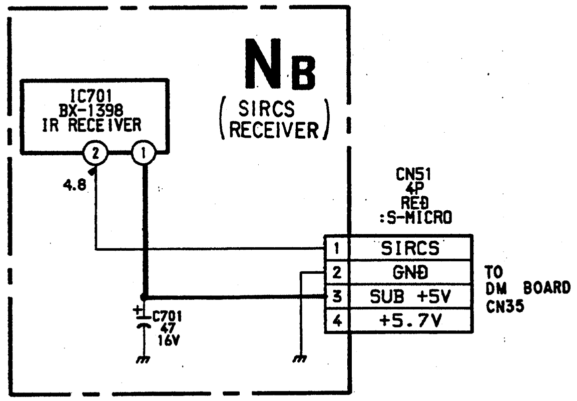

1
2
3
4
A
B
C
D
E
F
G
CN241
8P
RED
:S-MICRO
+POWER (R)
+50V
D1001
+P VOLT GATE
+15V
D1001
D10SC9M
Q1001
2SD1210
9.9
C1005
100
25V
C1003
220μ
63V
R1002
47k
R1001
1k
10.2
CN240
8P
BLK
:S-MICRO
TO
DC BOARD
CN228
+50V
+15V
+15V
GND
GND
-15V
-15V
-50V
1
2
3
4
5
6
7
8
C1001
220
Q1001
HEAP + POWER
C1002
220
R1007
1k
-9.4
R1008
47k
-9.1
C1004
220μ
63V
Q1004
2SB897
HEAP -POWER

Schematic diagrams

DG, NA, NB boards ➡

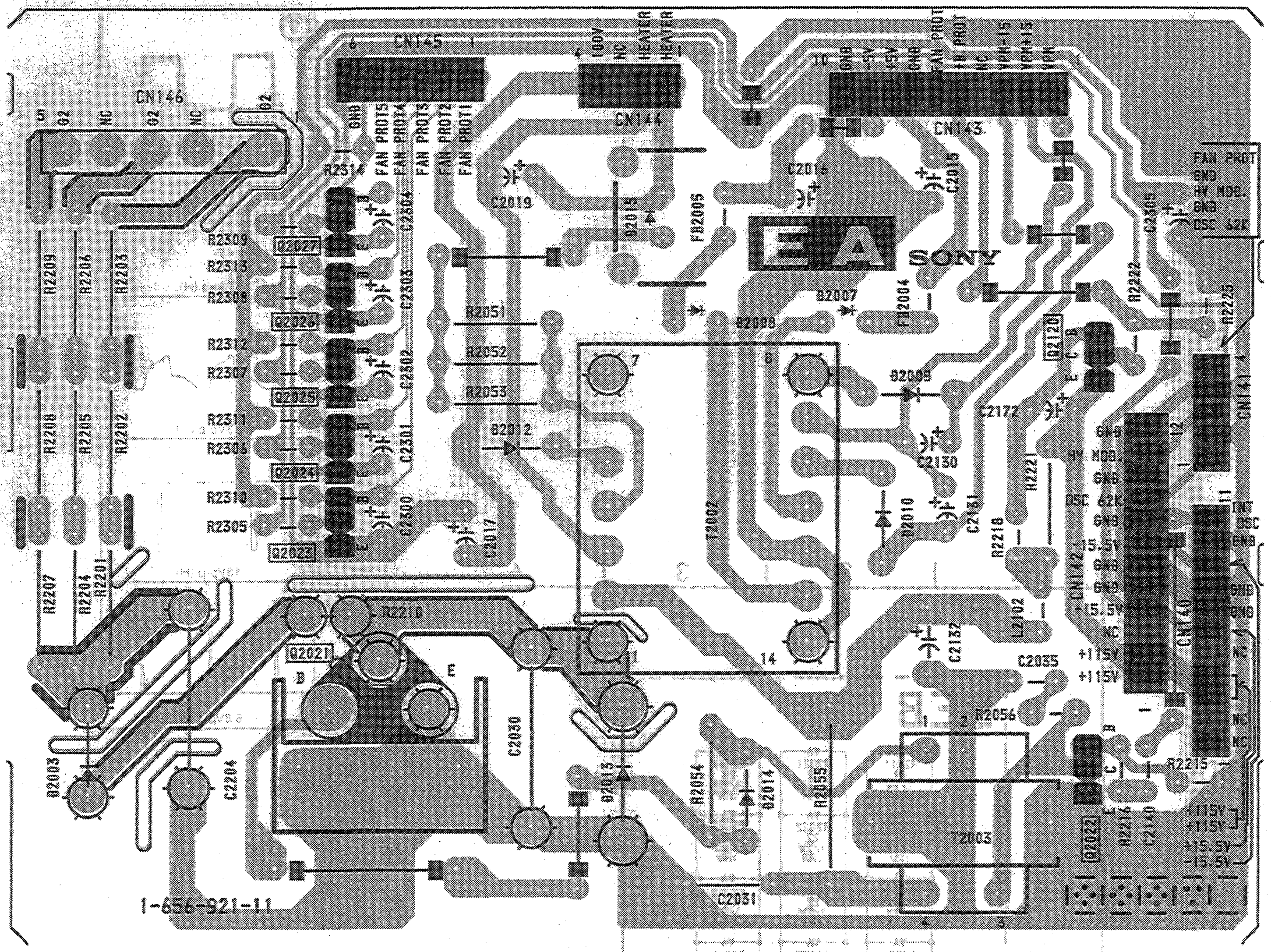

TO DC BOARD CN229
CN241 8P RED :S-MICRO
+POWER (R)
GND
+SIG (R)
GND
-SIG (R)
GND
-POWER (R)
GND
TO DC BOARD CN230
CN242 8P WHT :S-MICRO
+POWER (G)
GND
+SIG (G)
GND
-SIG (G)
GND
-POWER (G)
GND
TO DC BOARD CN231
CN243 8P YEL :S-MICRO
+POWER (B)
GND
+SIG (B)
GND
-SIG (B)
GND
-POWER (B)
GND
1 2 3 4 5 6 7 8
+50V
+15V
D1001 +P VOLT GATE
D1002 +P VOLT GATE
D1003 +P VOLT GATE
D1001 D10SC9M
D1002 D10SC9M
D1003 D10SC9M
Q1001 2SD1210
Q1002 2SD1210
Q1003 2SD1210
9.9
10.1
10.1
10.2
10.3
10.3
C1003 220µ 63V
C1005 100 25V
C1007 100 25V
C1009 100 25V
R1001 1k
R1002 47k
R1003 1k
R1004 47k
R1005 1k
R1006 47k
C1001 220
Q1001 HEAP + POWER
Q1002 HEAP +POWER
Q1003 HEAP +POWER
C1002 220
R1007 1k
R1008 47k
R1009 1k
R1010 47k
R1011 1k
R1012 47k
C1006 100 25V
C1008 100 25V
C1010 100 25V
-9.4
-9.2
-9.2
-9.1
-9.0
-8.9
C1004 220µ 63V
D1004 D10SC6MR
D1005 D10SC6MR
D1006 D10SC6MR
-P VOLT GATE
-P VOLT GATE
-P VOLT GATE
-15V
-50V
Q1004 2SB897 HEAP -POWER
Q1005 2SB897 HEAP -POWEP
Q1006 2SB897 HEAP -POWER
DG
(H SUB POWER SUPPLY)

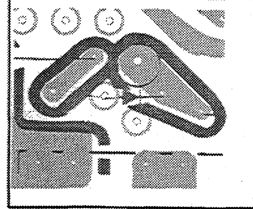

NA
(RECEIVER)
IC601 SBX1810-09 IR RECEIVER
2 1
4.8
4.9
C601 47 16V
CN50 4P YEL (-L) :S-MICRO
1 SIRCS
2 GND
3 SUB +5V
4 +5.7V
TO DM BOARD CN27
D602 TLR113A
STANDBY
R604 22k
R602 220
3.5
Q601 2SC2785 LED SW
1.5
1.1
R601 100
D601 TLG113A
POWER
R605 10k
R603 100


NB
(SIRCS RECEIVER)
IC701 BX-1398 IR RECEIVER
2 1
4.8
C701 47 16V
CN51 4P RED :S-MICRO
1 SIRCS
2 GND
3 SUB +5V
4 +5.7V
TO DM BOARD CN35

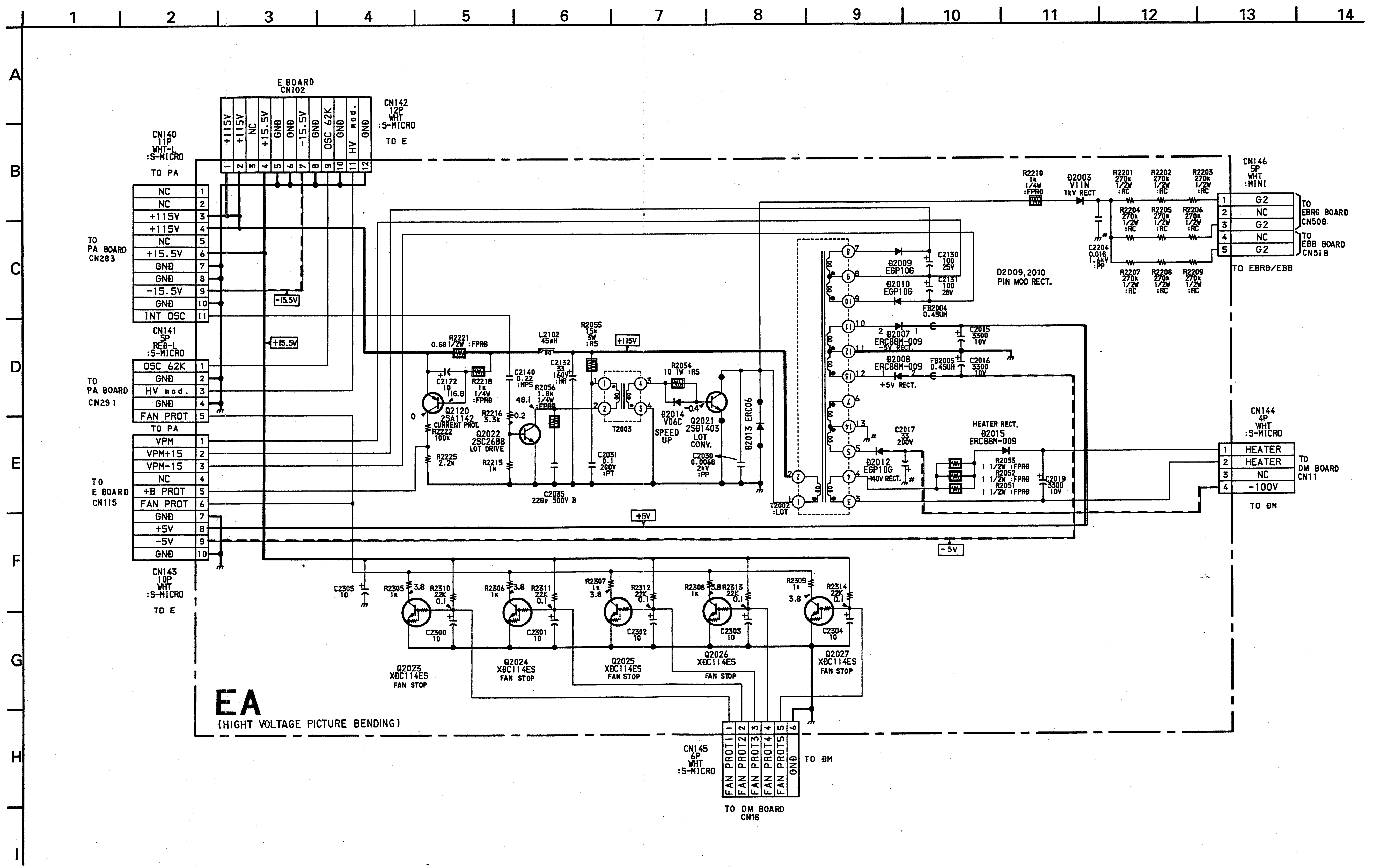
EA

– EA BOARD –


CN146
G2
NC
CN145
GND
FAN PROT5
FAN PROT4
FAN PROT3
FAN PROT2
FAN PROT1
100V
HEATER
CN144
CN143
GND
-5V
+5V
IB PROT
VPH+15
VPH
FAN PROT
HV MOD.
OSC 62K
EA
SONY
CN141
CN142
CN140
+15.5V
-15.5V
+115V
INT OSC
T2002
T2003
Q2021
Q2022
Q2023
Q2024
Q2025
Q2026
Q2027
Q2120
C2016
C2017
C2019
C2030
C2031
C2035
C2130
C2131
C2132
C2172
C2204
C2300
C2301
C2302
C2303
C2304
C2305
D2003
D2007
D2008
D2009
D2010
D2012
D2013
D2014
D2015
FB2004
FB2005
L2102
R2051
R2052
R2053
R2054
R2055
R2056
R2201
R2202
R2203
R2204
R2205
R2206
R2207
R2208
R2209
R2210
R2215
R2216
R2218
R2221
R2222
R2225
R2305
R2306
R2307
R2308
R2309
R2310
R2311
R2312
R2313
R2314
1-656-921-11



NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.


EA
(HIGHT VOLTAGE PICTURE BENDING)
E BOARD CN102
CN142 12P WHT :S-MICRO
TO E
+115V
+115V
NC
+15.5V
GND
GND
-15.5V
GND
OSC 62K
GND
HV mod.
GND
CN140 11P WHT-L :S-MICRO
TO PA
TO PA BOARD CN283
NC
NC
+115V
+115V
NC
+15.5V
GND
GND
-15.5V
GND
INT OSC
CN141 5P RED-L :S-MICRO
TO PA BOARD CN291
OSC 62K
GND
HV mod.
GND
FAN PROT
TO PA
TO E BOARD CN115
VPM
VPM+15
VPM-15
NC
+B PROT
FAN PROT
GND
+5V
-5V
GND
CN143 10P WHT :S-MICRO
TO E
-15.5V
+15.5V
+115V
+5V
-5V
Q2120 2SA1142 CURRENT PROT.
Q2022 2SC2688 LOT DRIVE
T2003
D2014 V06C SPEED UP
Q2021 2SD1403 LOT CONV.
D2013 ERC06
T2002 :LOT
D2009 EGP10G
D2010 EGP10G
D2009,2010 PIN MOD RECT.
D2007 ERC88M-009 -5V RECT.
D2008 ERC88M-009 +5V RECT.
D2012 EGP10G 140V RECT.
HEATER RECT. D2015 ERC88M-009
R2210 1k 1/4W :FPRB
D2003 V11N 1kV RECT
C2204 0.016 1.6kV :PP
CN146 5P WHT :MINI
G2
NC
G2
NC
G2
TO EBRG BOARD CN508
TO EBB BOARD CN518
TO EBRG/EBB
CN144 4P WHT :S-MICRO
HEATER
HEATER
NC
-100V
TO DM BOARD CN11
TO DM
Q2023 XBC114ES FAN STOP
Q2024 XBC114ES FAN STOP
Q2025 XBC114ES FAN STOP
Q2026 XBC114ES FAN STOP
Q2027 XBC114ES FAN STOP
CN145 6P WHT :S-MICRO
FAN PROT1
FAN PROT2
FAN PROT3
FAN PROT4
FAN PROT5
GND
TO DM
TO DM BOARD CN16
1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I

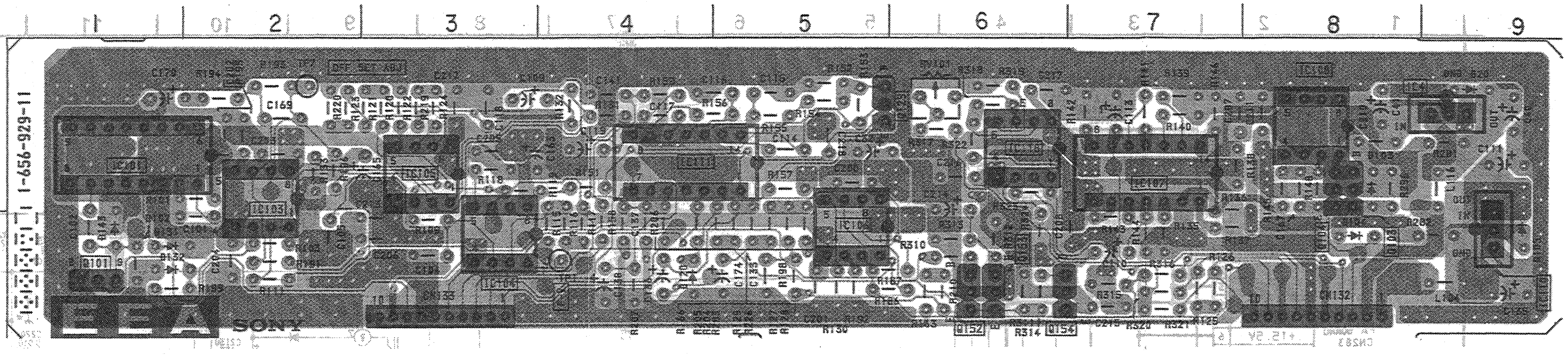
Schematic diagram
⬅ EA board

Schematic diagram
EEB board ➡

EEA

EEB

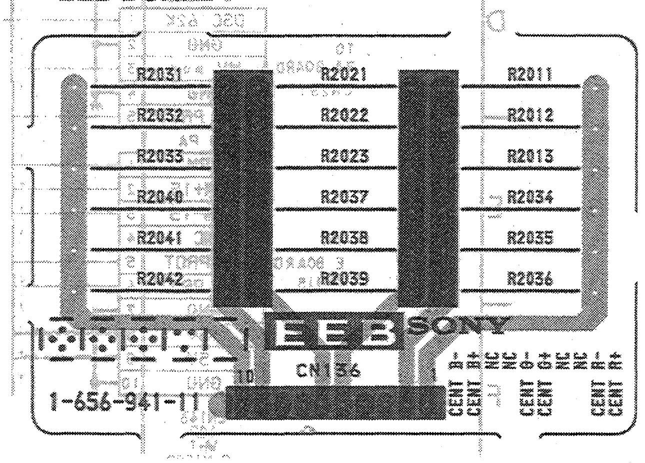
– EEA BOARD –

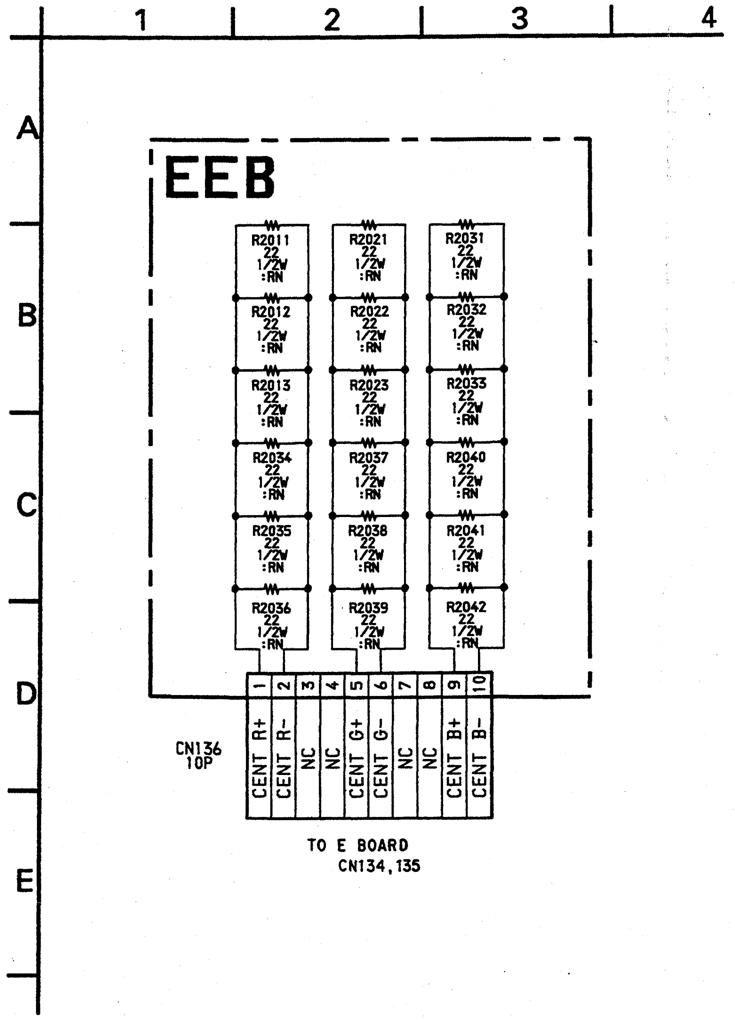

1
2
3
4
5
6
7
8
9
A
B
1-656-929-11
IC2101
IC2103
IC2105
IC2104
IC2111
IC2106
IC2118
IC2107
IC2108
EEA
SONY
CN2133
CN2132
C169
Q2101
Q2152
Q2154
+15.5V

EEA BOARD	
IC	
IC2004	A-9
IC2101	A-1
IC2103	A-2
IC2104	B-3
IC2105	A-3
IC2106	B-5
IC2107	A-7
IC2108	A-8
IC2110	B-9
IC2111	A-4
IC2118	A-6
TRANSISTOR	
Q2101	B-1
Q2103	A-8
Q2104	A-8
Q2129	A-5
Q2152	B-6
Q2153	B-6
Q2154	B-6
DIODE	
D2020	A-9
D2103	A-8
D2104	B-8
D2105	B-9
D2120	B-4
D2131	B-1
D2132	B-1
D2143	B-1
VARIABLE RESISTOR	
RV2101	A-6

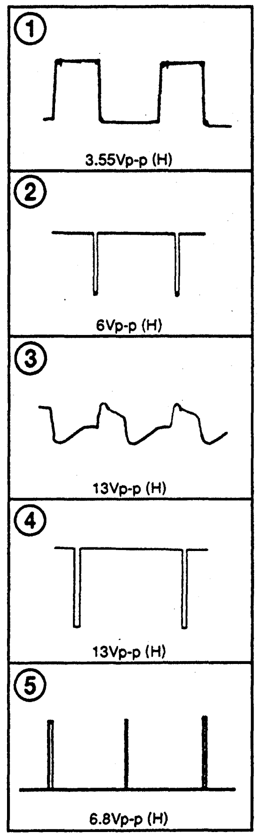
▨ : Pattern from the side which enables seeing.
▨ : Pattern of the rear side.

– EEB BOARD –


R2031
R2032
R2033
R2040
R2041
R2042
R2021
R2022
R2023
R2037
R2038
R2039
R2011
R2012
R2013
R2034
R2035
R2036
EEB
SONY
CN136
1-656-941-11
CENT B-
CENT B+
NC
NC
CENT G-
CENT G+
NC
NC
CENT R-
CENT R+

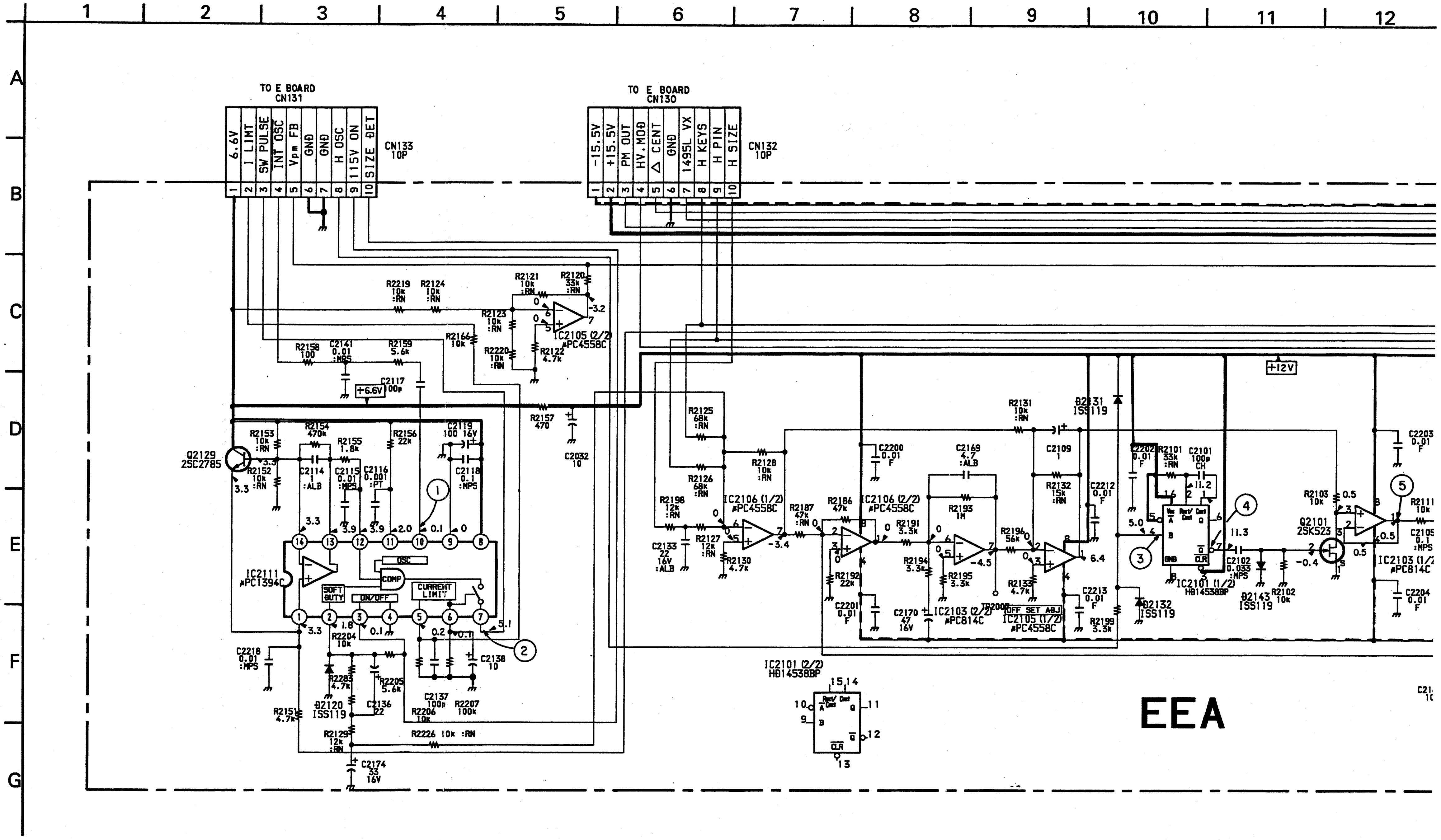

1
2
3
4
A
B
C
D
E
EEB
R2011 22 1/2W :RN
R2021 22 1/2W :RN
R2031 22 1/2W :RN
R2012 22 1/2W :RN
R2022 22 1/2W :RN
R2032 22 1/2W :RN
R2013 22 1/2W :RN
R2023 22 1/2W :RN
R2033 22 1/2W :RN
R2034 22 1/2W :RN
R2037 22 1/2W :RN
R2040 22 1/2W :RN
R2035 22 1/2W :RN
R2038 22 1/2W :RN
R2041 22 1/2W :RN
R2036 22 1/2W :RN
R2039 22 1/2W :RN
R2042 22 1/2W :RN
1 CENT R+
2 CENT R-
3 NC
4 NC
5 CENT G+
6 CENT G-
7 NC
8 NC
9 CENT B+
10 CENT B-
CN136
10P
TO E BOARD
CN134,135

EEA BOARD

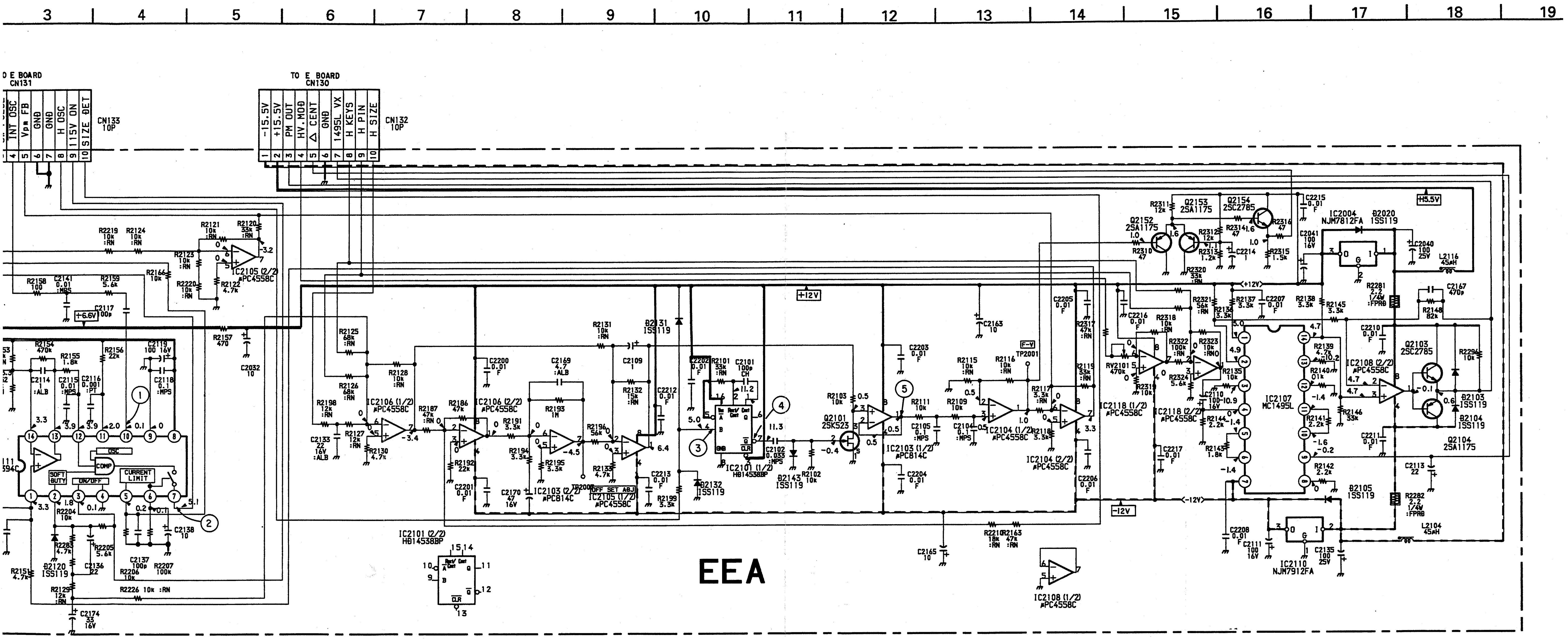

①
3.55Vp-p (H)
②
6Vp-p (H)
③
13Vp-p (H)
④
13Vp-p (H)
⑤
6.8Vp-p (H)

EEA BOARD

IC2004	+12V REG.
IC2101	H. PULSE GEN.
IC2103	F-V AMP
IC2104	F-V AMP
IC2105	F-V AMP
IC2106	F-V AMP
IC2107	MOD LEVEL CONT.
IC2108	PIN MOD PRE AMP
IC2110	−12V REG.
IC2111	PIN MOD REG. CONT.
IC2118	HV. MOD. AMP
Q2101	F-V SW
Q2103	PIN MOD PRE BUFF.
Q2104	PIN MOD PRE BUFF.
Q2129	POWER ON BIAS
Q2152	CENT CORRECT AMP
Q2153	CENT CORRECT AMP
Q2154	CENT CORRECT AMP
D2020	+12V REG. PROT.
D2103	PROT.
D2104	PROT.
D2105	−12V REG. PROT.
D2120	PROT.
D2131	PROT.
D2132	PROT.
D2143	CLAMP


1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
TO E BOARD CN131
6.6V
I LIMT
SW PULSE
INT OSC
Vpm FB
GND
GND
H OSC
115V ON
SIZE DET
CN133 10P
TO E BOARD CN130
−15.5V
+15.5V
PM OUT
HV.MOD
Δ CENT
GND
1495L VX
H KEYS
H PIN
H SIZE
CN132 10P
Q2129 2SC2785
IC2111 μPC1394C
SOFT DUTY
ON/OFF
OSC
COMP
CURRENT LIMIT
IC2105 (2/2) μPC4558C
IC2106 (1/2) μPC4558C
IC2106 (2/2) μPC4558C
IC2103 (2/2) μPC814C
IC2105 (1/2) μPC4558C
OFF SET ADJ
RV2001
IC2101 (1/2) HD14538BP
IC2101 (2/2) HD14538BP
Q2101 2SK523
IC2103 (1/2) μPC814C
D2120 1SS119
D2131 1SS119
D2132 1SS119
D2143 1SS119
+6.6V
+12V
EEA

Sche
← EE


3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
TO E BOARD CN131
INT OSC
Vp FB
GND
GND
H OSC
115V ON
SIZE DET
CN133 10P
TO E BOARD CN130
-15.5V
+15.5V
PM OUT
HV.MOD
△ CENT
GND
1495L VX
H KEYS
H PIN
H SIZE
CN132 10P
+12V
-12V
+15.5V
+6.6V
IC2105 (2/2) μPC4558C
IC2106 (1/2) μPC4558C
IC2106 (2/2) μPC4558C
IC2103 (2/2) μPC814C
IC2105 (1/2) μPC4558C
OFF SET ADJ
IC2101 (1/2) HD14538BP
IC2101 (2/2) HD14538BP
Q2101 2SK523
IC2103 (1/2) μPC814C
IC2104 (1/2) μPC4558C
IC2104 (2/2) μPC4558C
F-V TP2001
IC2118 (1/2) μPC4558C
IC2118 (2/2) μPC4558C
RV2101 470k
IC2107 MC1495L
IC2108 (2/2) μPC4558C
IC2108 (1/2) μPC4558C
Q2103 2SC2785
Q2104 2SA1175
Q2152 2SA1175
Q2153 2SA1175
Q2154 2SC2785
IC2004 NJM7812FA
IC2110 NJM7912FA
D2020 1SS119
D2131 1SS119
D2132 1SS119
D2143 1SS119
D2103 1SS119
D2104 1SS119
D2105 1SS119
D2120 1SS119
L2116 45μH
L2104 45μH
SOFT START
ON/OFF
COMP
OSC
CURRENT LIMIT
①
②
③
④
⑤
EEA

Schematic diagram

← EEA board

E [H. DY DRIVE]

E BOARD

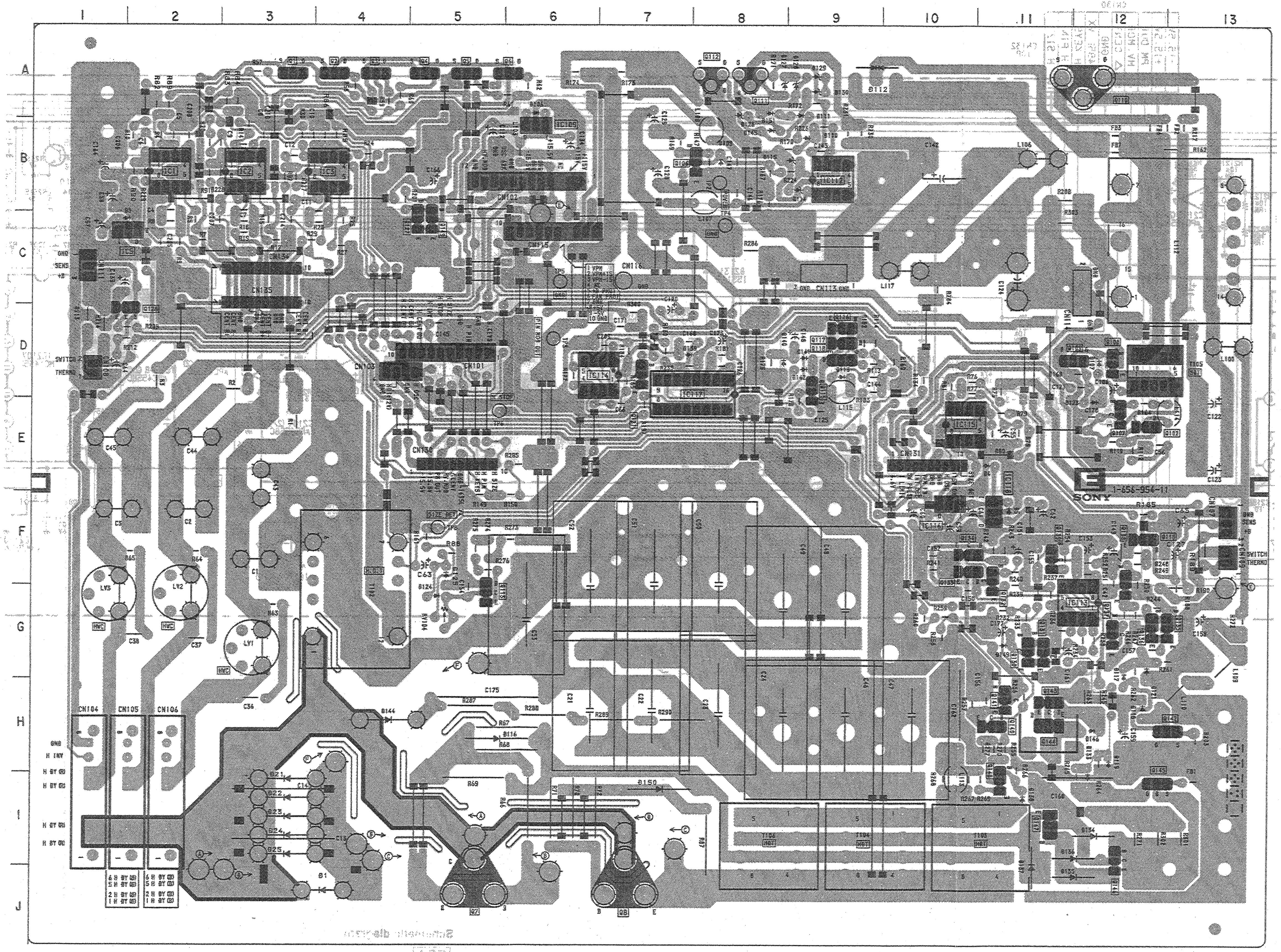
IC	
IC1	B-2
IC2	B-3
IC3	B-4
IC5	C-1
IC109	B-6
IC112	B-9
IC113	G-12
IC114	D-6
IC115	E-10
IC116	F-10
IC117	D-7
IC118	F-11

TRANSISTOR	
Q1	A-3
Q2	A-4
Q3	A-4
Q4	A-5
Q5	A-5
Q6	A-5
Q7	J-5
Q8	J-7
Q102	E-12
Q106	B-8
Q107	E-12
Q108	D-12
Q109	D-12
Q110	A-12
Q111	A-8
Q112	A-8
Q113	G-5
Q115	D-9
Q116	D-9
Q117	D-9
Q118	D-9
Q119	F-12
Q121	D-7
Q127	C-5
Q128	D-2
Q130	G-11
Q131	G-11
Q132	F-11
Q133	F-10
Q134	F-10
Q135	G-13
Q136	G-12
Q137	G-12
Q138	F-12
Q139	F-11
Q140	H-11
Q141	H-11
Q142	H-13
Q143	H-11
Q144	H-11
Q145	I-12
Q146	J-12
Q147	I-11
Q148	H-11
Q149	C-5

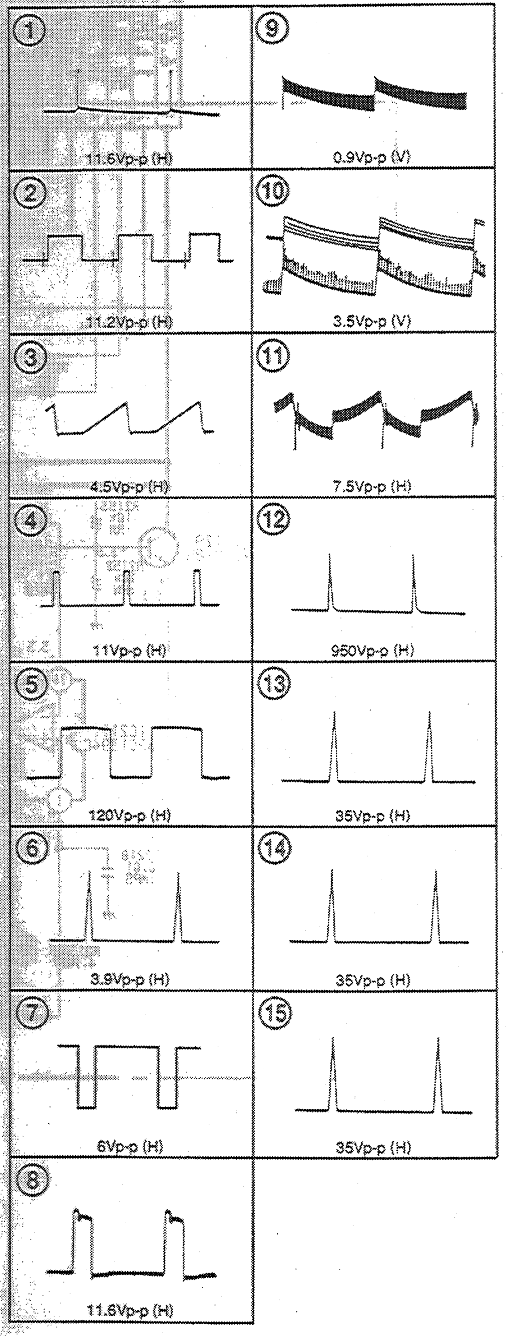
DIODE	
D1	J-4
D3	C-1
D4	E-11
D5	F-11
D21	I-3
D22	I-3
D23	I-3
D24	I-3
D25	I-3
D106	A-6
D107	D-12
D109	B-8
D110	B-9
D111	A-9
D112	A-9
D113	D-9
D114	B-9
D115	B-9
D116	H-6
D117	G-12
D118	H-12
D119	H-12
D121	G-12
D123	E-12
D124	G-5
D125	F-5
D126	A-8
D127	A-8
D128	A-9
D129	A-9
D130	A-9
D133	H-12
D134	I-12
D135	I-12
D136	I-12
D137	I-11
D138	I-11
D139	D-7
D140	D-9
D141	D-9
D142	D-9
D144	H-4
D145	B-8
D146	H-12
D149	G-11
D150	I-7
D151	A-8

VARIABLE RESISTOR	
RV104	G-5

– E BOARD –

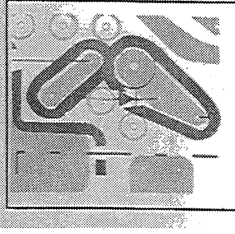

1
2
3
4
5
6
7
8
9
10
11
12
13
A
B
C
D
E
F
G
H
I
J
IC1
IC2
IC3
IC5
IC109
IC112
IC113
IC114
IC115
IC116
IC117
IC118
CN104
CN105
CN106
CN101
CN102
CN103
CN113
CN114
CN115
CN116
CN130
CN131
CN134
CN135
LY1
LY2
LY3
HWC
Q7
Q8
L106
L108
L115
L117
T102
T104
FB1
FB2
FB3
SWITCH
THERMO
GND
SENS
+B
H INV
E
SONY
1-656-954-11

E BOARD



E BOARD

IC1	H. CENT DRIVE (R)	Q145	H. DRIVE
IC2	H. CENT DRIVE (G)	Q146	H. DRIVE BUFF.
IC3	H. CENT DRIVE (B)	Q147	H. DRIVE BUFF.
IC5	−12V REG.	Q148	IB DET.
IC109	+12V REG.	Q149	OSC BUFF.
IC112	PIN MOD AMP		
IC113	H. OSC DET.		
IC114	H. SIZE PROT.	D1	H. OUT DAMP
IC115	+115V DET.	D3	−12V REG. PROT.
IC116	+12V REG.	D4	+12V REG. PROT.
IC117	H. STOP	D5	+12V REG. PROT.
IC118	+12V REG.	D21	H. OUT DAMP
		D22	H. OUT DAMP
		D23	H. OUT DAMP
Q1	H. CENT OUT (R)	D24	H. OUT DAMP
Q2	H. CENT OUT (R)	D25	H. OUT DAMP
Q3	H. CENT OUT (G)	D106	+12V REG. PROT.
Q4	H. CENT OUT (G)	D107	PIN MOD REG. BIAS
Q5	H. CENT OUT (B)	D109	CLAMP
Q6	H. CENT OUT (B)	D110	LEVEL SHIFT
Q7	H. OUT	D111	LEVEL SHIFT
Q8	H. OUT	D112	PIN MOD REG. CLAMP
Q102	POWER OFF PROT.	D113	CLAMP
Q106	PIN MOD PROT.	D114	PROT.
Q107	PIN MOD REG. DRIVE	D115	PROT.
Q108	PIN MOD REG. DRIVE	D116	SPEED UP
Q109	PIN MOD REG. PRE DRIVE	D117	SPEED UP
Q110	PIN MOD REG.	D118	CLAMP
Q111	PIN MOD OUT	D119	PROT.
Q112	PIN MOD OUT	D121	PROT.
Q113	H. SIZE CONST.	D123	CLAMP
Q115	H. STOP SW	D124	H. SIZE DET.
Q116	HD OUT	D125	CLAMP
Q117	HD OUT	D126	PIN MOD DET.
Q118	HD DRIVE	D127	PROT.
Q119	FAN PROT. SW	D128	PROT.
Q121	CURRENT PROT. SW	D129	PROT.
Q127	OSC BUFF.	D130	PROT.
Q128	FAN PROT. SW	D133	SPEED UP
Q130	H. OSC BUFF.	D134	H. DRIVE PROT.
Q131	H. OSC BUFF.	D135	H. DRIVE PROT.
Q132	CONST. AMP	D136	H. DRIVE PROT.
Q133	CONST. AMP	D137	H. DRIVE PROT.
Q134	CONST. AMP	D138	THERM CANCEL
Q135	VARIABLE REG. OUT	D139	H. SIZE PROT. SW
Q136	VARIABLE REG. OUT	D140	DISCHARGE
Q137	IB CONT.	D141	H. STOP GATE
Q138	IB CONT.	D142	H. STOP GATE
Q139	IB CONT.	D144	PULSE PROT.
Q140	IB DET.	D145	PROT.
Q141	PULSE DET.	D146	PROT.
Q142	VARIABLE REG. OUT	D149	PROT.
Q143	H. DRIVE REG.	D150	SPEED UP
Q144	H. DRIVE REG.	D151	LEVEL SHIFT



NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

EBB

[MAGNET FOCUS DRIVER (B)]

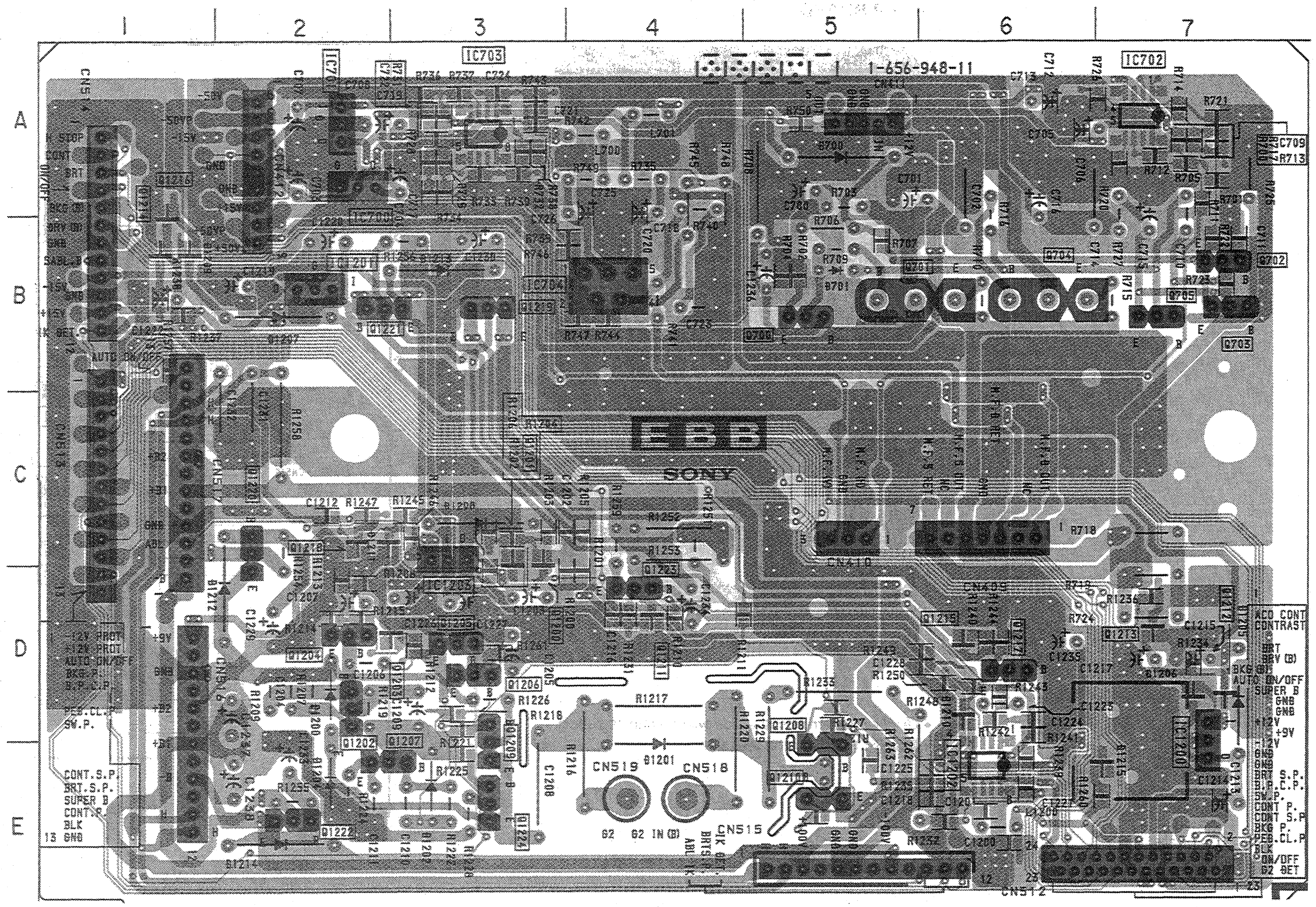
EBB BOARD

IC	
IC700	A-2
IC701	A-2
IC702	A-7
IC703	A-3
IC704	B-4
IC1200	D-7
IC1201	B-2
IC1202	E-6
IC1203	C-3

TRANSISTOR	
Q700	B-5
Q701	B-5
Q702	B-7
Q703	B-7
Q704	B-6
Q705	B-7
Q1200	D-3
Q1201	C-3
Q1202	D-2
Q1203	D-3
Q1204	D-2
Q1205	D-3
Q1206	D-3
Q1207	E-3
Q1208	D-5
Q1209	D-3
Q1210	E-5
Q1211	D-4
Q1212	D-7
Q1213	D-7
Q1214	B-1
Q1215	D-6
Q1216	A-1
Q1217	D-6
Q1218	C-2
Q1219	B-3
Q1220	C-2
Q1221	B-2
Q1222	E-2
Q1223	D-4
Q1224	E-3

DIODE	
D700	A-5
D701	B-5
D1200	D-2
D1201	E-4
D1202	E-3
D1204	E-2
D1205	D-7
D1206	D-7
D1207	B-2
D1208	C-3
D1209	B-1
D1210	D-6
D1211	C-2
D1212	D-2
D1213	B-3
D1214	E-2
D1215	E-7

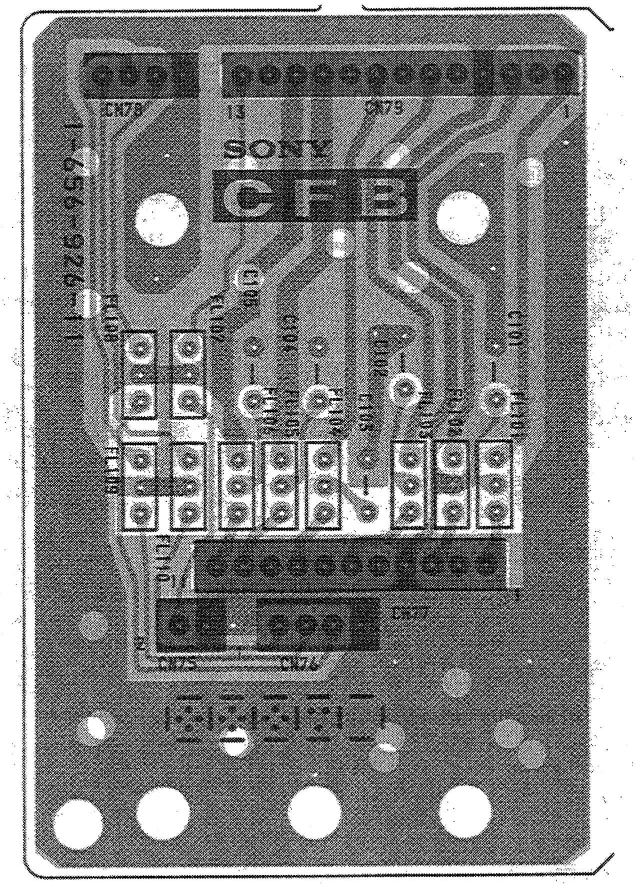
– EBB BOARD –


1
2
3
4
5
6
7
A
B
C
D
E
1-656-948-11
IC703
IC702
IC700
IC701
IC704
IC1201
IC1203
IC1202
IC1200
CN410
CN409
CN512
CN513
CN517
CN515
CN516
CN518
CN519
EBB
SONY
G2
G2 IN (B)
CONT.S.P.
BRT.S.P.
SUPER B
CONT.P.
BLK
13 GND
ACO CONT
CONTRAST
BRT
BRV (B)
AUTO ON/OFF
SUPER B
GND
+12V
+9V
BRT S.P.
B.P.C.P.
SW.P.
CONT P.
CONT S.P.
BKG P.
DEB.CL.P.
BLK
ON/OFF
G2 SET

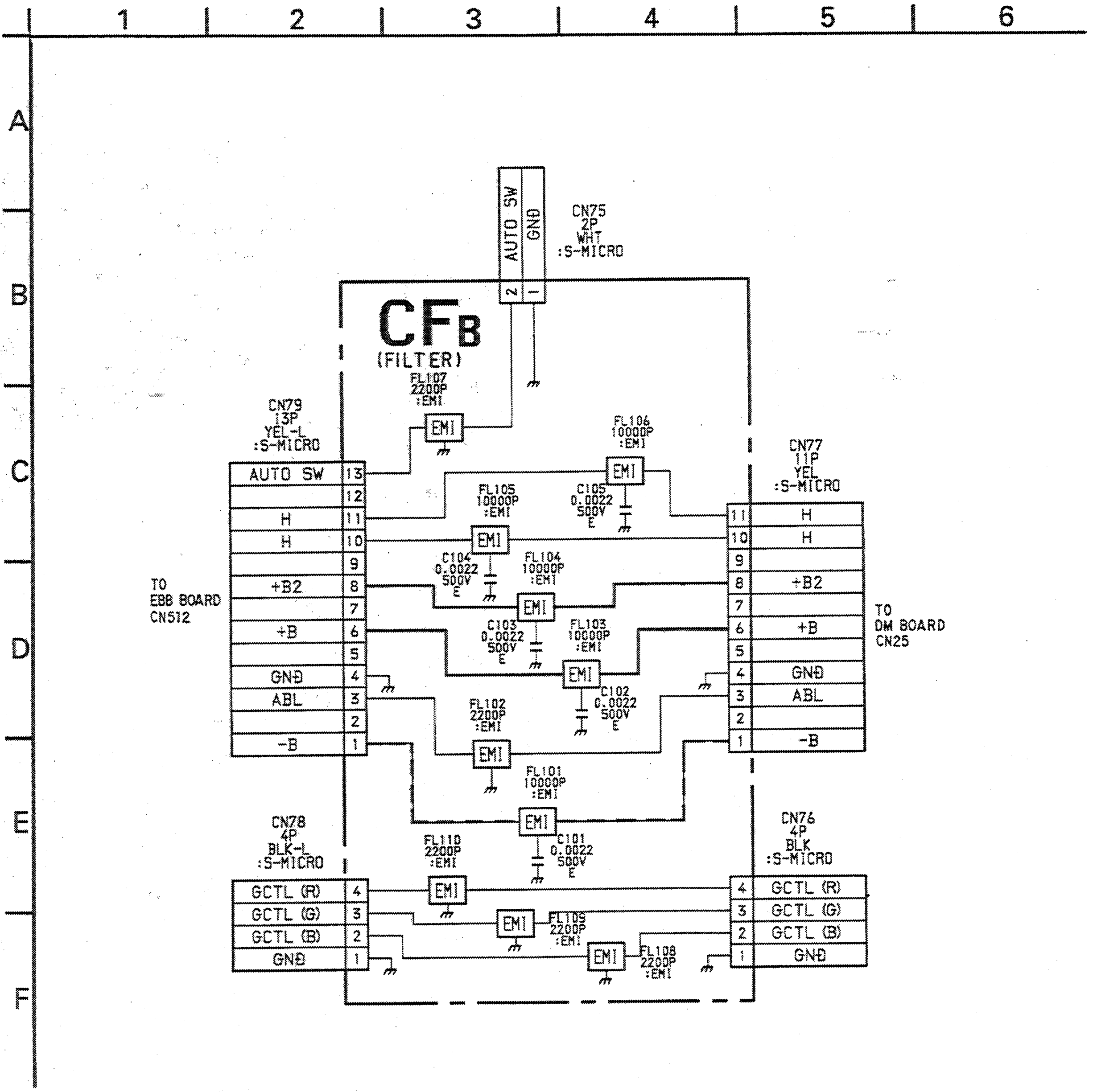
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

CFB [FILTER]

– CFB BOARD –


CN78
13
CN79
1
SONY
CFB
1-656-926-11
FL108
FL107
C106
C104
C102
C101
FL101
FL106
FL105
FL104
FL103
FL102
C105
C103
FL109
FL110
CN77
CN75
CN76

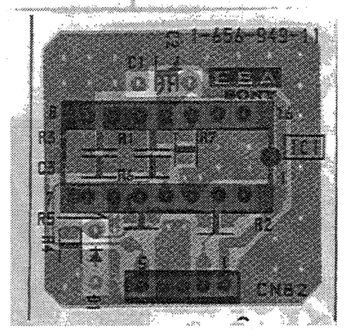
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.


1
2
3
4
5
6
A
B
C
D
E
F
CFB
(FILTER)
AUTO SW
GND
CN75
2P
WHT
:S-MICRO
FL107
2200P
:EMI
CN79
13P
YEL-L
:S-MICRO
AUTO SW
H
H
+B2
+B
GND
ABL
-B
TO
EBB BOARD
CN512
FL106
10000P
:EMI
FL105
10000P
:EMI
C105
0.0022
500V
E
C104
0.0022
500V
E
FL104
10000P
:EMI
C103
0.0022
500V
E
FL103
10000P
:EMI
C102
0.0022
500V
E
FL102
2200P
:EMI
FL101
10000P
:EMI
C101
0.0022
500V
E
EMI
CN77
11P
YEL
:S-MICRO
TO
DM BOARD
CN25
CN78
4P
BLK-L
:S-MICRO
GCTL (R)
GCTL (G)
GCTL (B)
GND
FL110
2200P
:EMI
FL109
2200P
:EMI
FL108
2200P
:EMI
CN76
4P
BLK
:S-MICRO

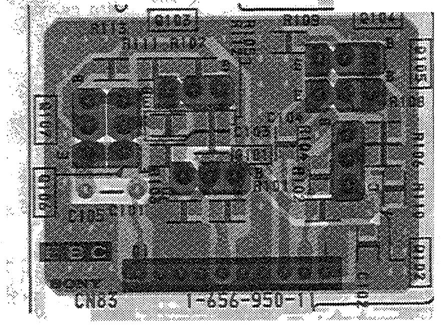
Schematic diagram
CFB board ➡

EBA **EBC** **EBD**

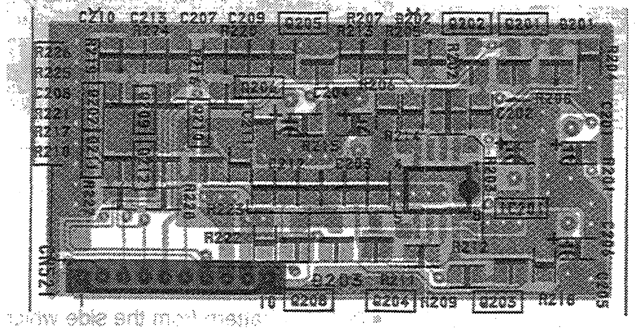
– EBA BOARD –


1-656-949-1
C1
EBA
SONY
IC1
R1
R7
R2
R3
R5
C3
CN82

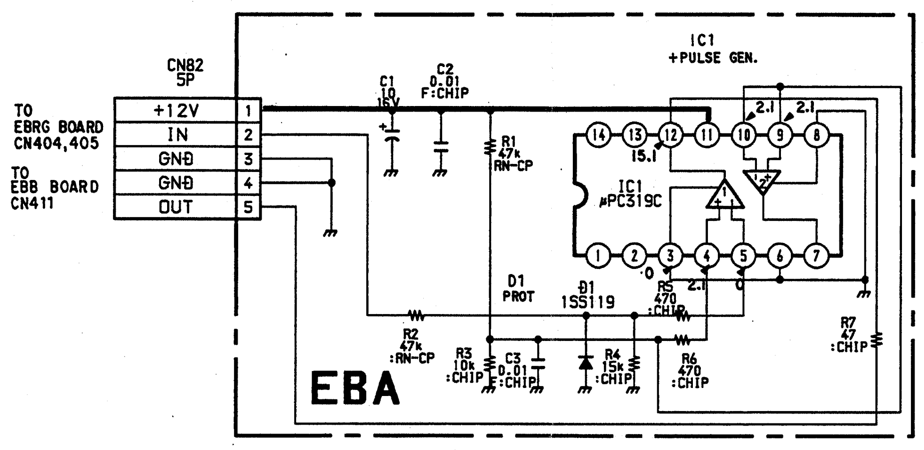
– EBC BOARD –

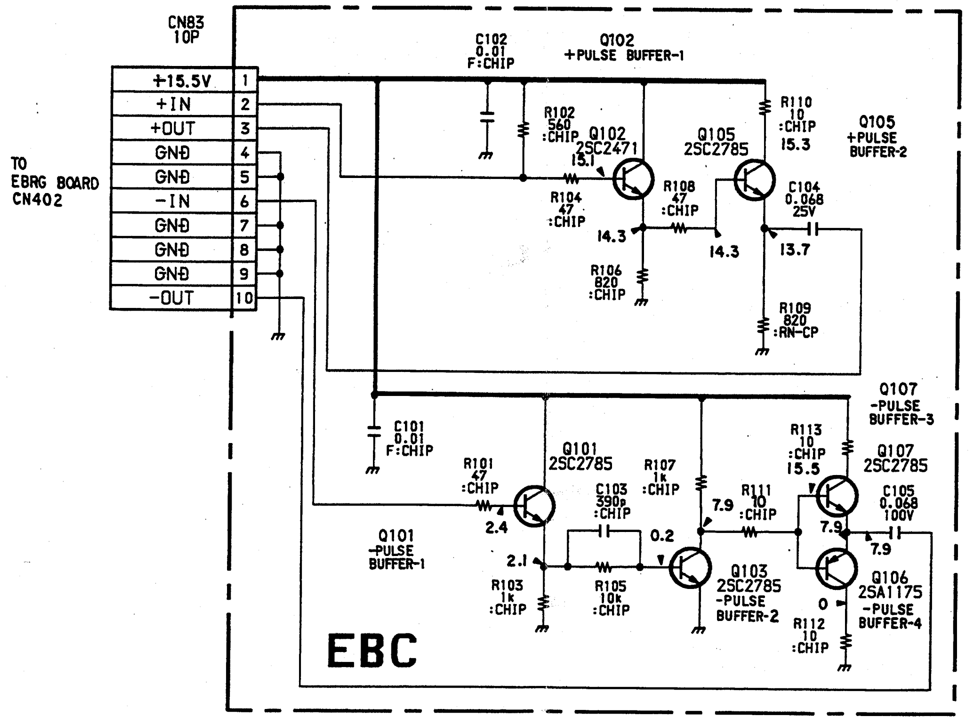

Q103
R113
R111
R102
R109
Q104
Q105
R108
C103
C105
EBC
SONY
CN83
1-656-950-1

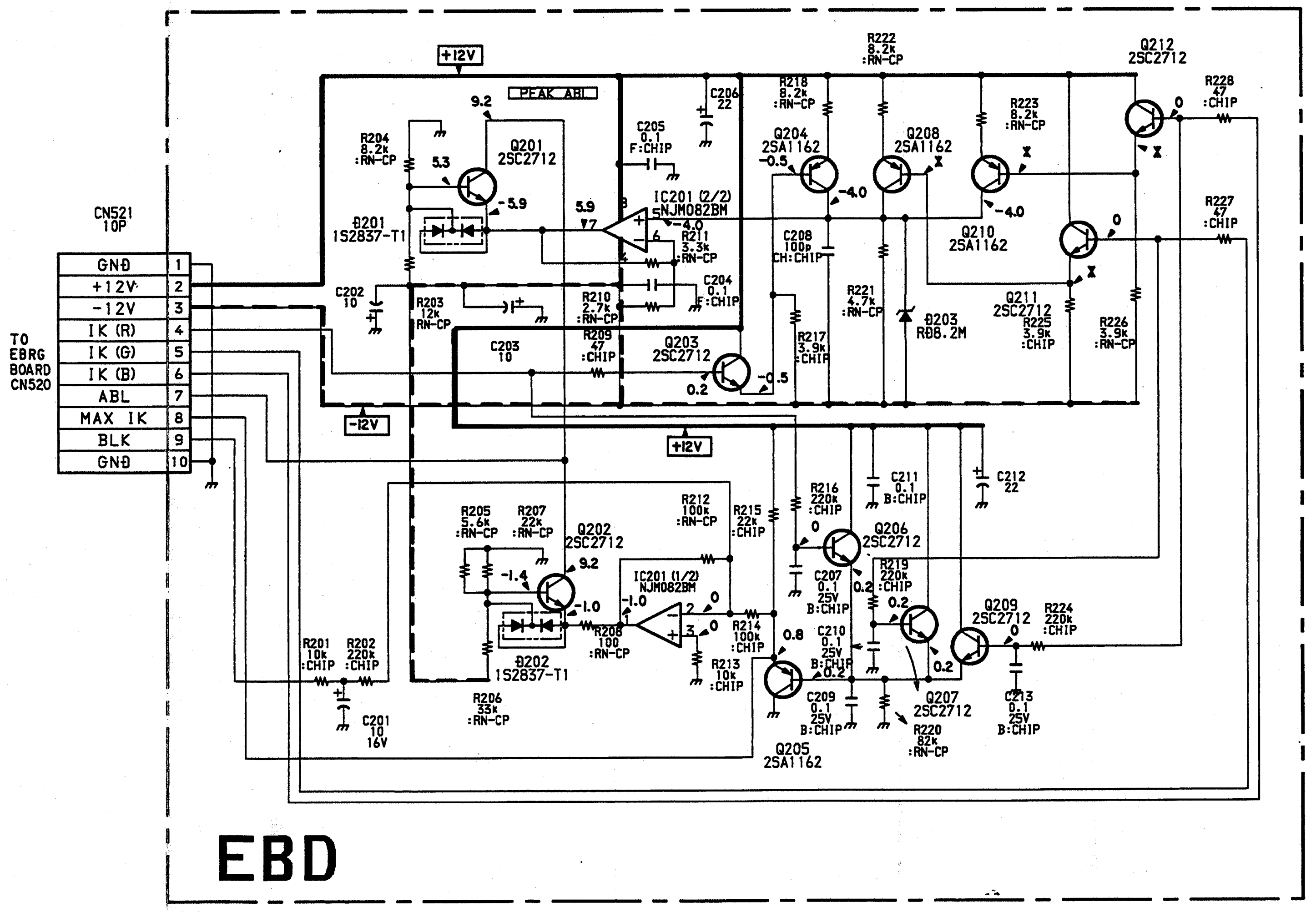
– EBD BOARD –


C210
C213
C207
C209
Q205
R207
Q202
Q201
R224
R225
R221
R217
R218
R212
R209
R216
Q208
Q204
Q203
CN84

- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.


EBA
CN82 5P
TO EBRG BOARD CN404,405
TO EBB BOARD CN411
+12V
IN
GND
GND
OUT
IC1 +PULSE GEN.
IC1 µPC319C
D1 PROT
D1 1S5119
C1 10 16V
C2 0.01 F:CHIP
R1 47k :RN-CP
R2 47k :RN-CP
R3 10k :CHIP
C3 0.01 :CHIP
R4 15k :CHIP
R5 470 :CHIP
R6 470 :CHIP
R7 47 :CHIP


EBC
CN83 10P
TO EBRG BOARD CN402
+15.5V
+IN
+OUT
GND
GND
-IN
GND
GND
GND
-OUT
Q102 +PULSE BUFFER-1
Q102 2SC2471
Q105 2SC2785
Q105 +PULSE BUFFER-2
Q101 2SC2785
Q101 -PULSE BUFFER-1
Q103 2SC2785 -PULSE BUFFER-2
Q107 2SC2785
Q107 -PULSE BUFFER-3
Q106 2SA1175 -PULSE BUFFER-4
C101 0.01 F:CHIP
C102 0.01 F:CHIP
C103 390p :CHIP
C104 0.068 25V
C105 0.068 100V
R101 47 :CHIP
R102 560 :CHIP
R103 1k :CHIP
R104 47 :CHIP
R105 10k :CHIP
R106 820 :CHIP
R107 1k :CHIP
R108 47 :CHIP
R109 820 :RN-CP
R110 10 :CHIP
R111 10 :CHIP
R112 10 :CHIP
R113 10 :CHIP


EBD
CN521 10P
TO EBRG BOARD CN520
GND
+12V
-12V
IK (R)
IK (G)
IK (B)
ABL
MAX IK
BLK
GND
+12V
-12V
PEAK ABL
IC201 (2/2) NJM082BM
IC201 (1/2) NJM082BM
Q201 2SC2712
Q202 2SC2712
Q203 2SC2712
Q204 2SA1162
Q205 2SA1162
Q206 2SC2712
Q207 2SC2712
Q208 2SA1162
Q209 2SC2712
Q210 2SA1162
Q211 2SC2712
Q212 2SC2712
D201 1S2837-T1
D202 1S2837-T1
D203 RD8.2M

EBD BOARD

IC201	(1) SINGLE ABL AMP (2) PEAK ABL AMP
Q201	PEAK ABL DRIVE
Q202	SINGLE ABL DRIVE
Q203	IK R BUFF-1
Q204	IK R BUFF-2
Q205	IK MIX
Q206	IK R BUFF-3
Q207	IK G BUFF-3
Q208	IK G BUFF-2
Q209	IK B BUFF-3
Q210	IK B BUFF-2
Q211	IK G BUFF-1
Q212	IK B BUFF-1
D201	PROT-2
D202	PROT-1
D203	

Schematic diagrams

← EBA, EBC, EBD boards

EBRG [MAGNET FOCUS DRIVER (R. G), PULSE GEN.]

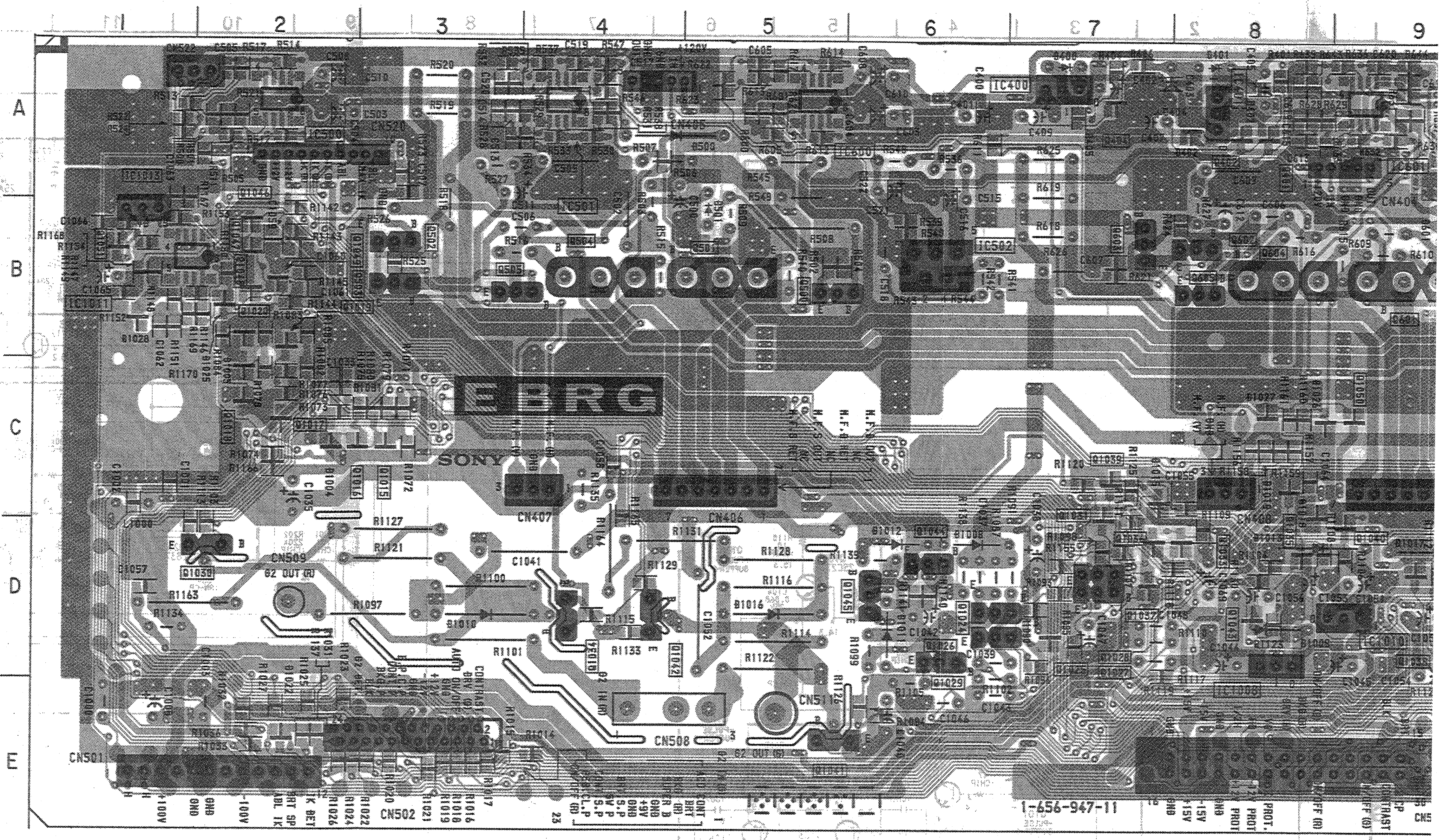
EBRG BOARD

IC	
IC400	A-7
IC401	A-8
IC500	A-2
IC501	A-4
IC502	B-6
IC600	A-5
IC601	A-9
IC602	B-10
IC1000	D-12
IC1002	D-11
IC1003	C-10
IC1004	C-10
IC1005	D-11
IC1006	C-11
IC1007	E-10
IC1008	D-8
IC1009	D-9
IC1010	D-9
IC1011	B-1
IC1012	C-11
IC1013	B-2

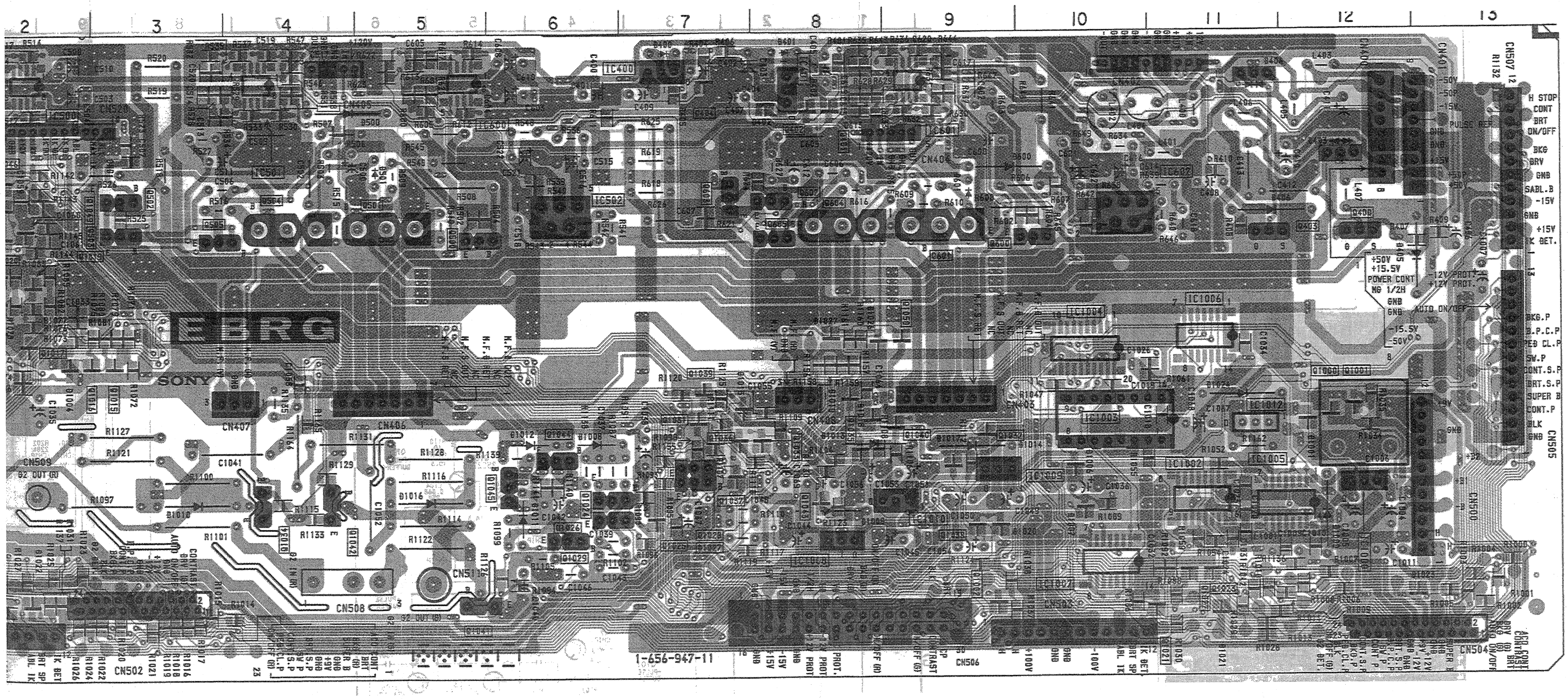
TRANSISTOR	
Q400	B-12
Q401	A-8
Q402	A-8
Q403	B-11
Q404	A-7
Q500	B-5
Q501	B-5
Q502	B-3
Q503	B-3
Q504	B-4
Q505	B-3
Q600	B-10
Q601	B-9
Q602	B-8
Q603	B-7
Q604	B-8
Q605	B-8
Q1000	C-12
Q1001	C-12
Q1002	E-9
Q1015	C-3
Q1016	C-3
Q1017	C-2
Q1018	C-2
Q1019	B-2
Q1020	B-2
Q1021	E-11
Q1022	E-11
Q1023	E-11
Q1024	D-6
Q1025	D-7
Q1026	D-6
Q1027	D-7
Q1028	D-7
Q1029	D-6
Q1030	D-2
Q1031	C-7
Q1032	D-9
Q1033	D-8
Q1034	D-4
Q1035	D-8
Q1036	D-7
Q1037	D-7
Q1038	D-9
Q1039	C-7
Q1040	D-9
Q1041	E-5
Q1042	D-4
Q1043	D-8
Q1044	D-6
Q1045	D-6
Q1046	B-2
Q1047	B-2
Q1048	B-2
Q1049	B-2
Q1050	C-9
Q1051	B-1

DIODE	
D400	A-7
D401	A-8
D402	A-8
D403	A-12
D404	A-11
D405	B-13
D406	B-11
D500	A-4
D501	B-5
D600	A-10
D601	B-9
D1000	D-12
D1001	D-12
D1004	A-11
D1005	C-2
D1006	D-10
D1007	D-10
D1008	D-6
D1009	D-8
D1010	D-3
D1011	D-6
D1012	D-6
D1013	D-8
D1014	D-9
D1015	C-7
D1016	D-5
D1017	D-9
D1018	C-8
D1019	C-8
D1020	D-9
D1021	E-11
D1022	E-2
D1023	E-13
D1024	C-11
D1025	B-2
D1026	C-8
D1027	C-8
D1028	B-1

– EBRG BOARD –


1
2
3
4
5
6
7
8
9
A
B
C
D
E
EBRG
SONY
CN501
CN502
CN407
CN406
CN508
CN509
CN511
IC400
IC500
IC501
IC502
IC600
IC601
IC1011
IC1013
G2 OUT (R)
G2 OUT (G)
1-456-947-11

OCUS DRIVER (R. G), PULSE GEN.]


2
3
4
5
6
7
8
9
10
11
12
13
SONY
EBRG
1-656-947-11
CN401
CN400
CN403
CN404
CN405
CN406
CN407
CN408
CN502
CN504
CN505
CN506
CN507
CN508
CN509
CN511
IC400
IC501
IC502
IC600
IC601
IC602
IC1002
IC1003
IC1004
IC1005
IC1006
IC1007
IC1012
H STOP
CONT
BRT
ON/OFF
BKG
BRV
GND
SABL.B
-15V
+15V
K BET.
+50V
+15.5V
POWER CONT
MG 1/2H
GND
AUTO ON/OFF
-15.5V
-50V
-12V PROT.
+12V PROT.
BKG.P
B.P.C.P
PEB CL.P
SW.P
CONT.S.P
BRT.S.P
SUPER B
CONT.P
BLK
+120V
-100V
+100V

● ▨ : Pattern from the side which enables seeing.
● ▨ : Pattern of the rear side.

EC

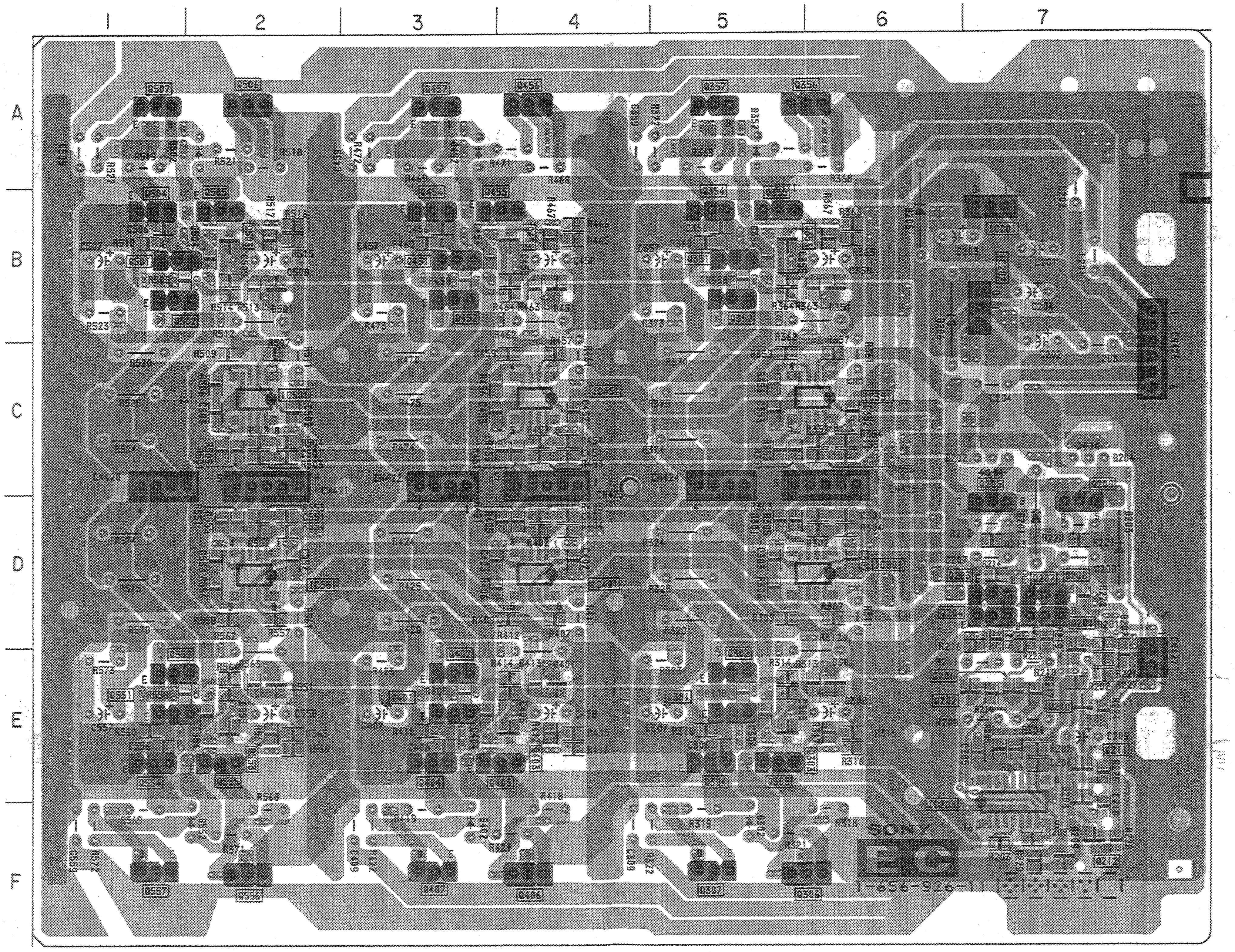
EC BOARD

IC	
IC201	B-7
IC202	B-7
IC203	F-7
IC301	D-6
IC351	C-6
IC401	D-4
IC451	C-4
IC501	C-2
IC551	D-2

TRANSISTOR	
Q201	D-7
Q210	E-7
Q211	E-7
Q212	F-7
Q301	E-5
Q302	E-5
Q303	E-5
Q304	E-5
Q305	E-5
Q306	F-5
Q307	F-5
Q351	B-5
Q352	B-5
Q353	B-5
Q354	B-5
Q355	B-5
Q356	A-5
Q357	A-5
Q401	E-3
Q402	E-3
Q403	E-4
Q404	E-3
Q405	E-4
Q406	F-4
Q407	F-3
Q451	B-3
Q452	B-3
Q453	B-4
Q454	B-3
Q455	B-3
Q456	A-4
Q457	A-3
Q501	B-1
Q502	B-1
Q503	B-2
Q504	B-1
Q505	B-2
Q506	A-2
Q507	A-1
Q551	E-1
Q552	E-1
Q553	E-2
Q554	E-1
Q555	E-2
Q556	F-2
Q557	F-1

DIODE	
D205	B-6
D206	B-6
D207	D-7
D208	F-7
D209	F-7
D301	E-6
D302	F-5
D351	B-6
D352	A-5
D401	E-4
D402	F-3
D451	B-4
D452	A-3
D501	B-2
D502	A-2
D551	E-2
D552	F-2

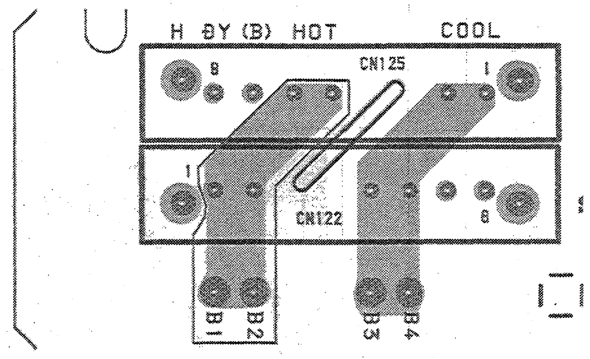
– EC BOARD –



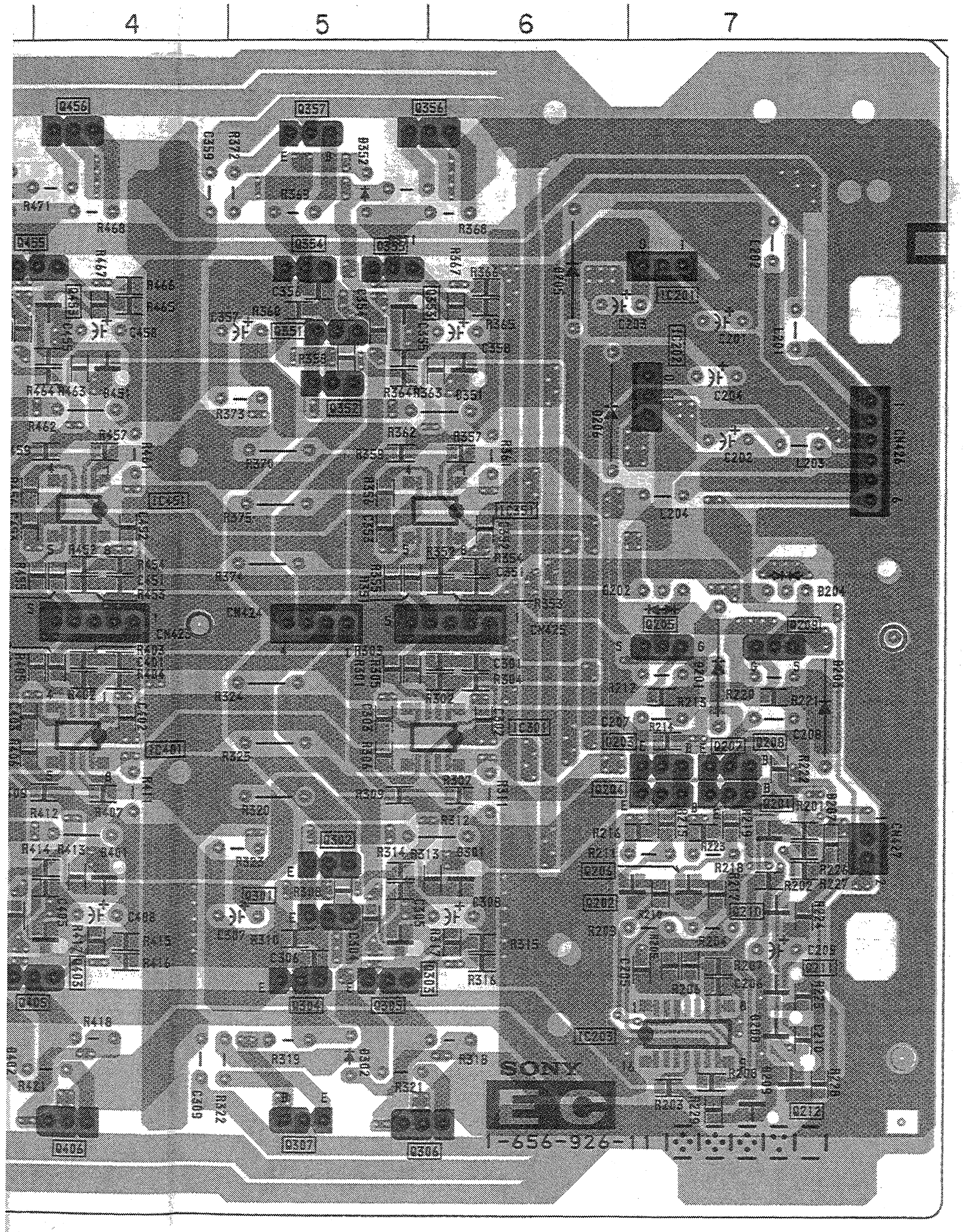
ED

[H. POLARITY CHANGE]

– ED BOARD –

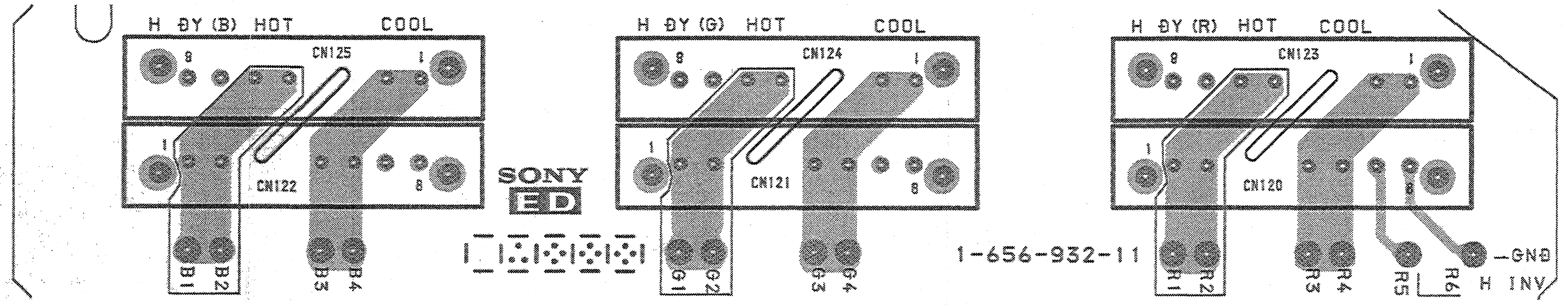


• ▨ : F
• ▨ : F


4
5
6
7
Q456
Q357
Q356
Q354
Q353
Q351
Q352
IC451
IC351
IC301
IC401
IC201
IC202
IC203
CN424
CN425
CN426
CN427
Q205
Q206
Q207
Q208
Q209
Q210
Q211
Q212
Q301
Q302
Q303
Q304
Q305
Q306
Q307
Q405
Q406
L201
L202
L203
L204
C201
C202
C203
C204
C205
C206
SONY
EC
1-656-926-11

ED [H. POLARITY CHANGE]

– ED BOARD –


H ÐY (B) HOT
COOL
CN125
CN122
B1
B2
B3
B4
H ÐY (G) HOT
COOL
CN124
CN121
G1
G2
G3
G4
SONY
ED
H ÐY (R) HOT
COOL
CN123
CN120
R1
R2
R3
R4
R5
R6
GND
H INV
1-656-932-11

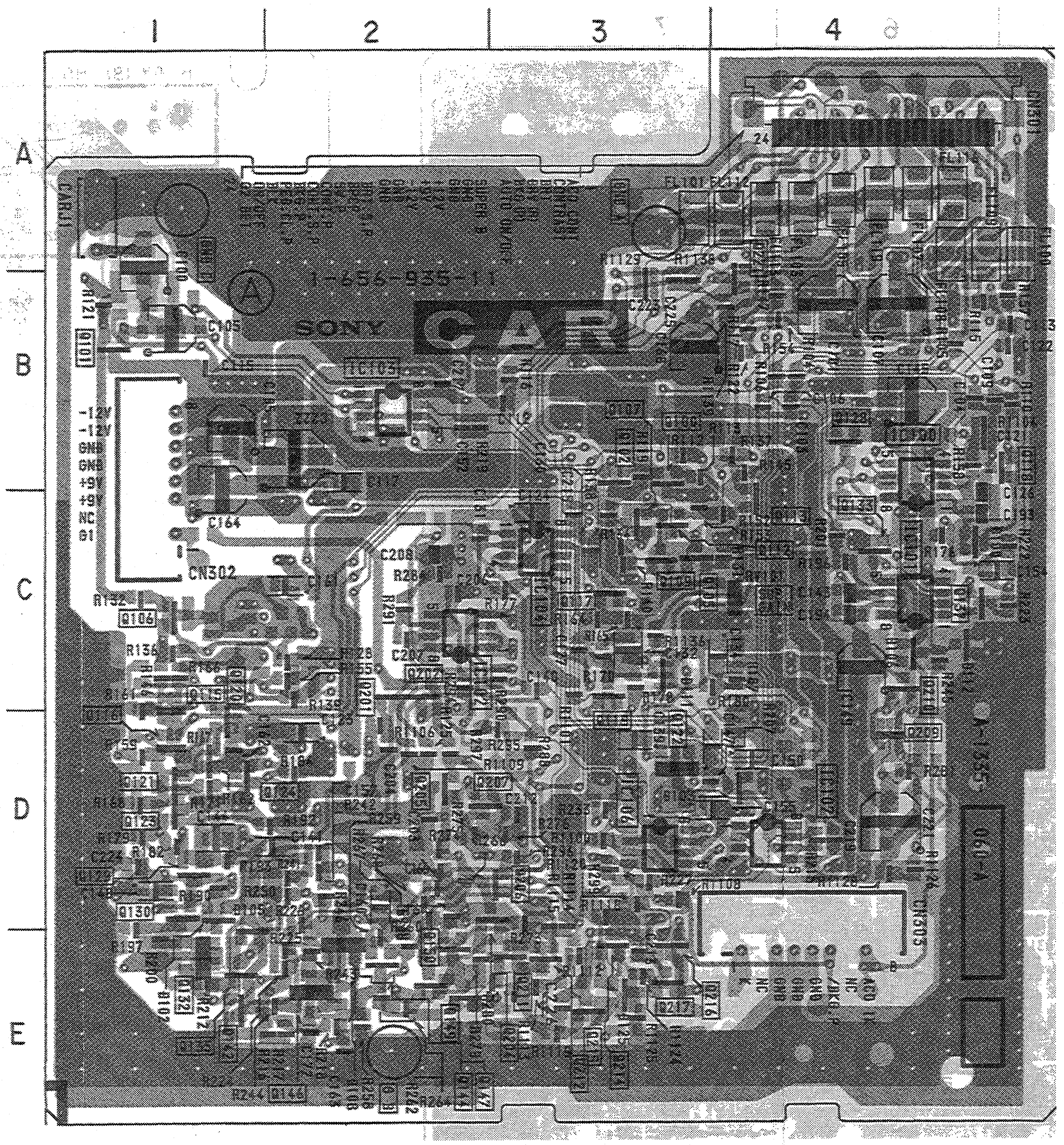
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

CAR [PRE AMP]

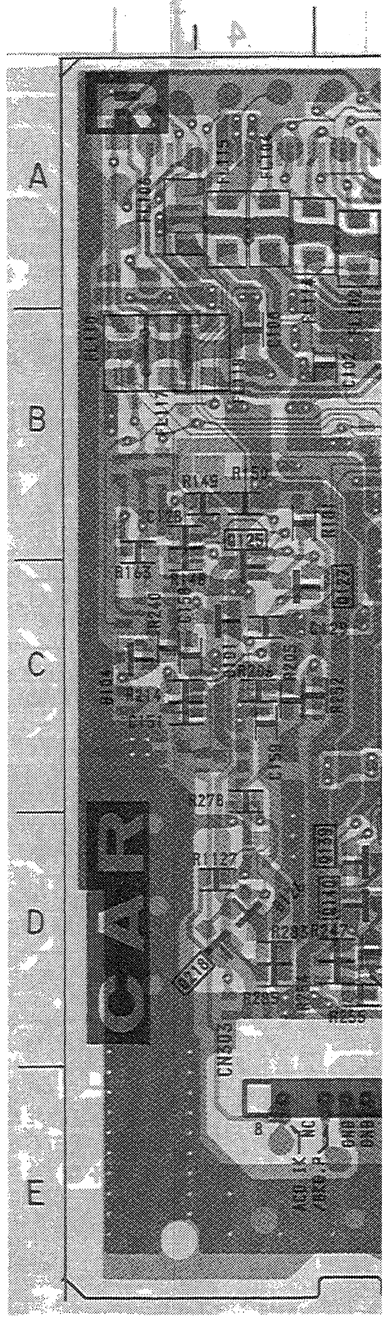
**CAR BOARD
(COMPONENT SIDE)**

IC	
IC100	B-4
IC101	C-4
IC102	C-2
IC103	B-2
IC104	C-3
IC106	D-3
IC107	D-4
TRANSISTOR	
Q100	B-3
Q101	B-1
Q102	B-3
Q105	C-3
Q106	C-1
Q107	C-3
Q109	C-3
Q112	C-3
Q113	C-4
Q115	C-1
Q116	D-1
Q117	C-3
Q118	B-4
Q119	C-3
Q120	D-1
Q121	D-1
Q122	D-3
Q123	D-1
Q124	D-1
Q128	B-4
Q129	D-1
Q130	D-1
Q132	E-1
Q133	C-4
Q135	E-1
Q137	C-4
Q142	E-1
Q144	E-2
Q146	E-2
Q147	E-2
Q149	E-2
Q150	E-2
Q201	C-2
Q202	C-2
Q204	E-3
Q205	D-2
Q206	D-3
Q207	D-2
Q209	D-4
Q210	C-4
Q211	E-3
Q212	E-3
Q214	E-3
Q215	E-3
Q216	E-3
Q217	E-3
Q221	B-4
DIODE	
D100	C-4
D102	D-1
D103	D-4
D105	D-1
D106	C-4
D108	E-2
D110	E-3
D111	C-3
D112	C-4
D125	E-3
VARIABLE RESISTOR	
RV101	C-4

– CAR BOARD – <Component Side>



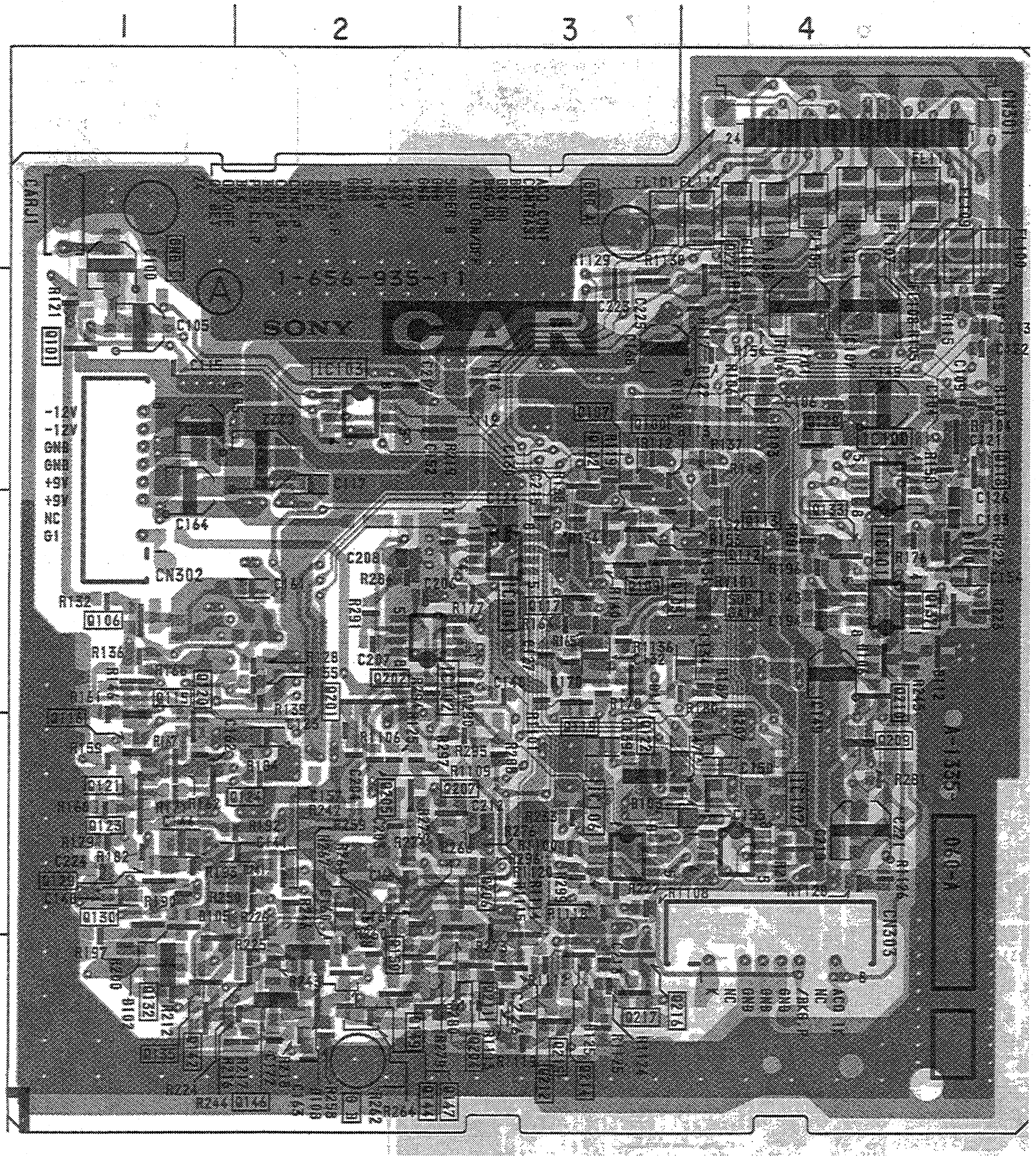
<Conductor Side>



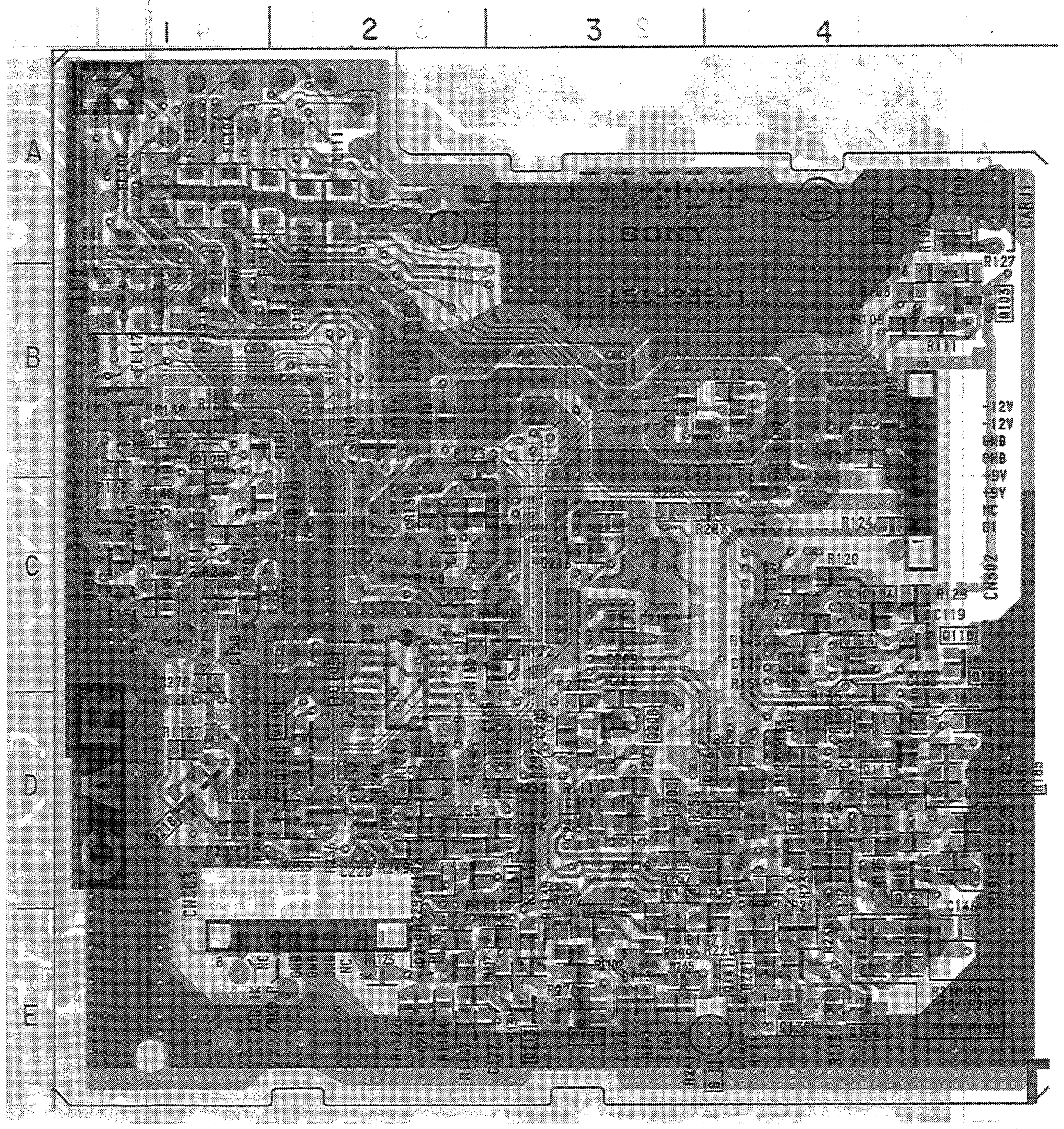
CAR [PRE AMP]

2	E-1
4	E-2
5	E-2
7	E-2
9	E-2
0	E-2
1	C-2
2	C-2
4	E-3
5	D-2
6	D-3
7	D-2
9	D-4
0	C-4
1	E-3
2	E-3
4	E-3
5	E-3
6	E-3
7	E-3
1	B-4
IODE	
0	C-4
2	D-1
3	D-4
5	D-1
6	C-4
8	E-2
0	E-3
1	C-3
2	C-4
5	E-3
RIABLE SISTOR	
01	C-4

– CAR BOARD – <Component Side>


1
2
3
4
A
B
C
D
E
CAR
SONY
1-656-935-11
CN302
CN301
CN303
-12V
-12V
GND
GND
+9V
+9V
NC
G1
IC103
1-1335

<Conductor Side>


1
2
3
4
A
B
C
D
E
CAR
SONY
1-656-935-11
CN302
CN303
-12V
-12V
GND
GND
+9V
+9V
NC
G1

CAR BOARD (CONDUCTOR SIDE)

IC	
IC105	C-2
TRANSISTOR	
Q103	B-4
Q104	C-4
Q108	C-4
Q110	C-4
Q111	D-4
Q114	C-4
Q125	B-1
Q126	D-4
Q127	C-1
Q131	D-4
Q134	D-4
Q136	E-4
Q138	E-4
Q139	D-2
Q140	D-2
Q141	E-4
Q143	D-4
Q145	D-3
Q148	E-3
Q151	E-3
Q161	D-2
Q203	D-3
Q208	D-3
Q213	E-3
Q218	D-1
Q219	E-2
DIODE	
D101	C-1
D104	C-1
D107	E-3
D113	E-3
D126	D-1

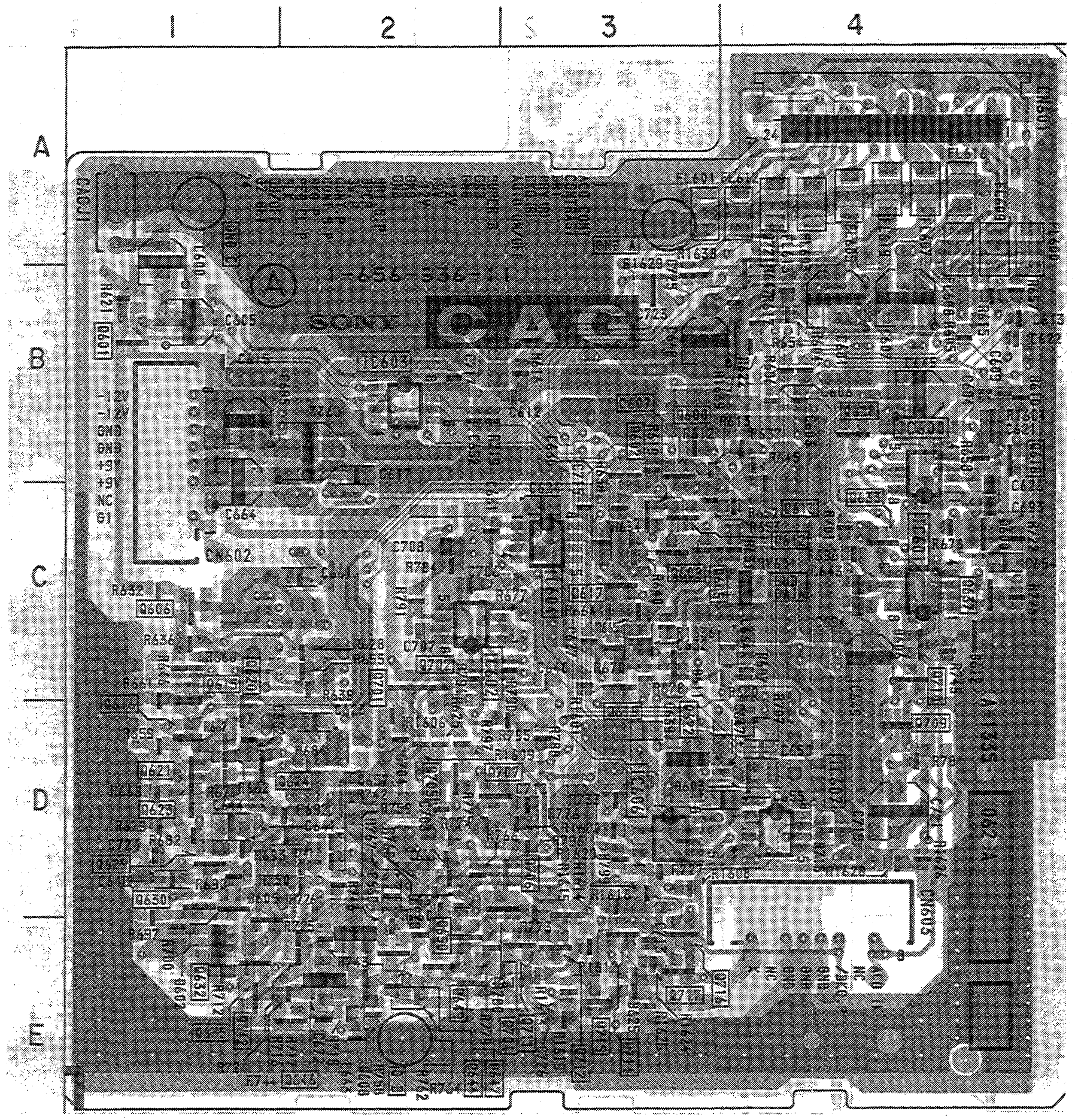
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

CAG [PRE AMP]

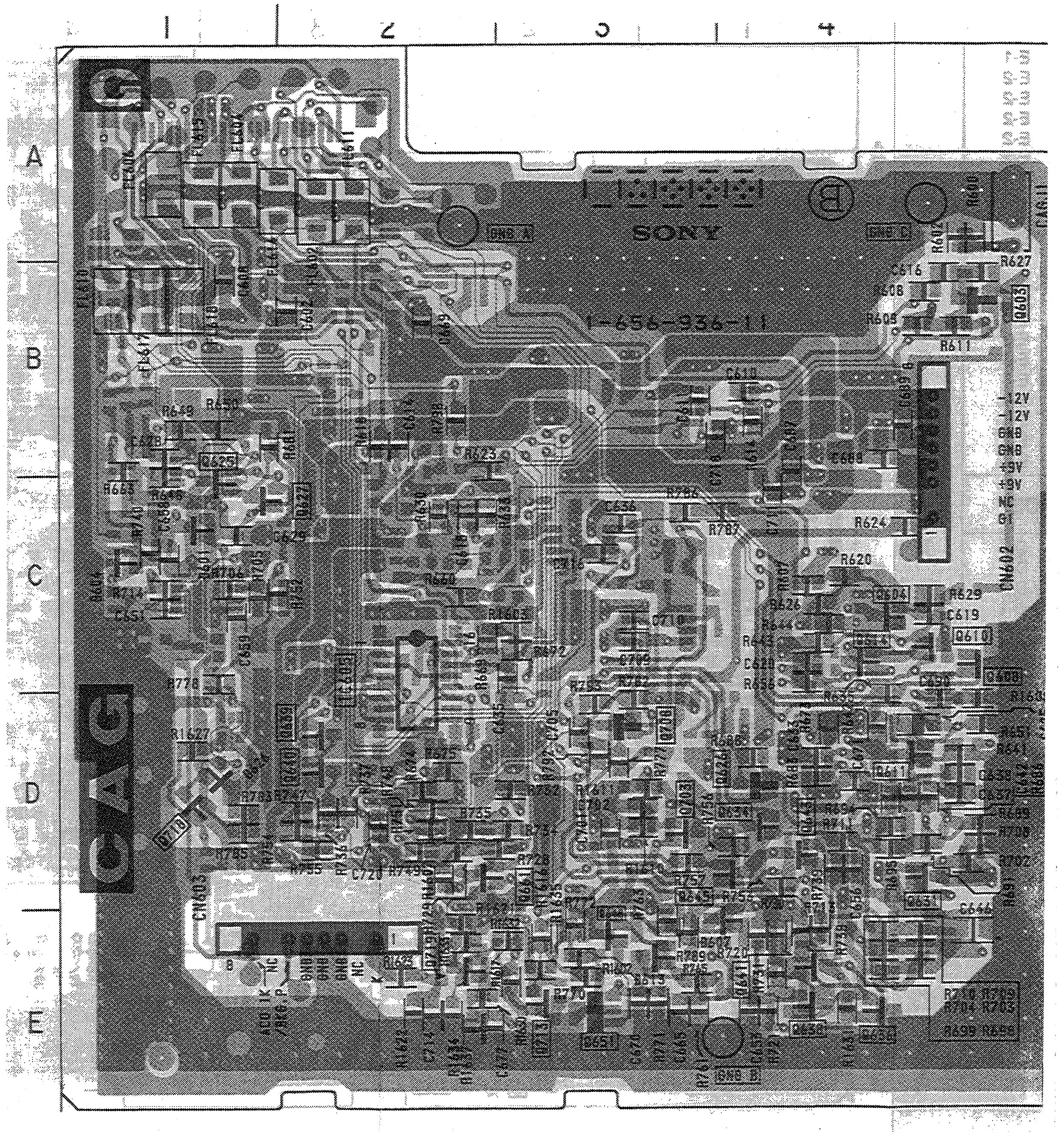
CAG BOARD (COMPONENT SIDE)

IC	
IC600	B-4
IC601	C-4
IC602	C-2
IC603	B-2
IC604	C-3
IC606	D-3
IC607	D-4
TRANSISTOR	
Q600	B-3
Q601	B-1
Q602	B-3
Q605	C-3
Q606	C-1
Q607	C-3
Q609	C-3
Q612	C-3
Q613	C-4
Q615	C-1
Q616	D-1
Q617	C-3
Q618	B-4
Q619	C-3
Q620	D-1
Q621	D-1
Q622	D-3
Q623	D-1
Q624	D-1
Q628	B-4
Q629	D-1
Q630	D-1
Q632	E-1
Q633	C-4
Q635	E-1
Q637	C-4
Q642	E-1
Q644	E-2
Q646	E-2
Q647	E-2
Q649	E-2
Q650	E-2
Q701	C-2
Q702	C-2
Q704	E-3
Q705	D-2
Q706	D-3
Q707	D-2
Q709	D-4
Q710	C-4
Q711	E-3
Q712	E-3
Q714	E-3
Q715	E-3
Q716	E-3
Q717	E-3
Q721	B-4
DIODE	
D600	C-4
D602	D-1
D603	D-4
D605	D-1
D606	C-4
D608	E-2
D610	E-3
D611	C-3
D612	C-4
D625	E-3
VARIABLE RESISTOR	
RV601	C-4

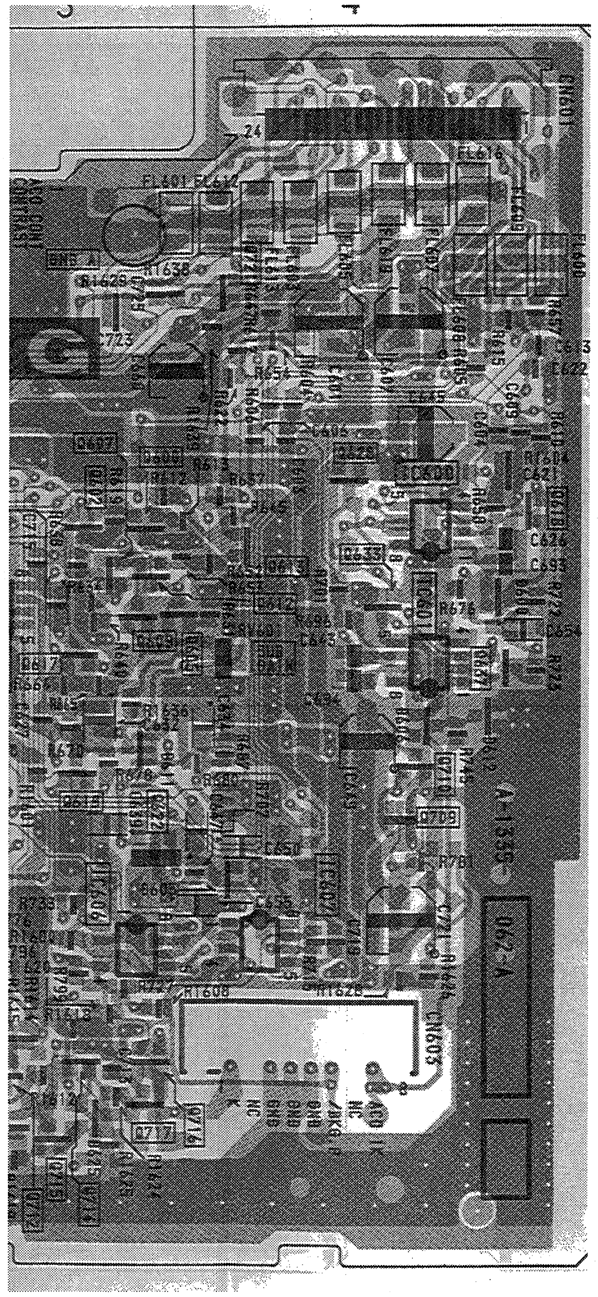
– **CAG BOARD** – <Component Side>


1
2
3
4
A
B
C
D
E
1-656-936-11
SONY
CAG
CN602
CN603
IC603
IC600
IC601
IC604
IC606
IC607
-12V
-12V
GND
GND
+9V
+9V
NC
G1
A-1335

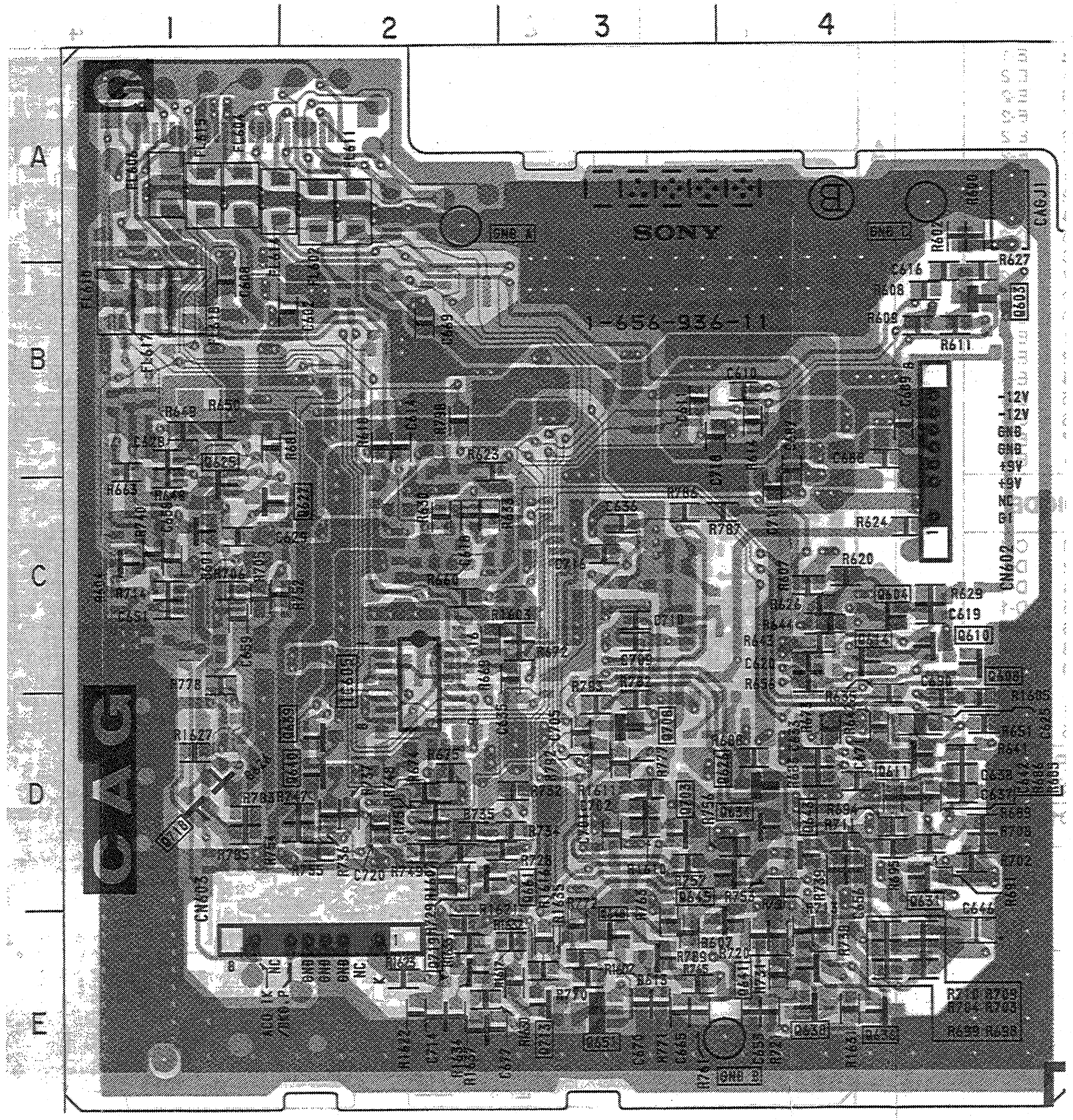
<Conductor Side>


1
2
3
4
A
B
C
D
E
SONY
1-656-936-11
CAG
CN602
CN603
-12V
-12V
GND
GND
+9V
+9V
NC
G1

: Patte
: Patte


G
CN601
A-1335-
04-2-A
CN603

<Conductor Side>


1
2
3
4
A
B
C
D
E
G
CAG
SONY
B
1-656-936-11
CN602
CN603
-12V
-12V
GND
GND
+9V
+9V
NC
GND A
GND C
GND B

CAG BOARD (CONDUCTOR SIDE)

IC	
IC605	C-2
TRANSISTOR	
Q603	B-4
Q604	C-4
Q608	C-4
Q610	C-4
Q611	D-4
Q614	C-4
Q625	B-1
Q626	D-4
Q627	C-1
Q631	D-4
Q634	D-4
Q636	E-4
Q638	E-4
Q639	D-2
Q640	D-2
Q641	E-4
Q643	D-4
Q645	D-3
Q651	E-3
Q661	D-2
Q703	D-3
Q708	D-3
Q713	E-3
Q718	D-1
DIODE	
D601	C-1
D604	C-1
D607	E-3
D626	D-1

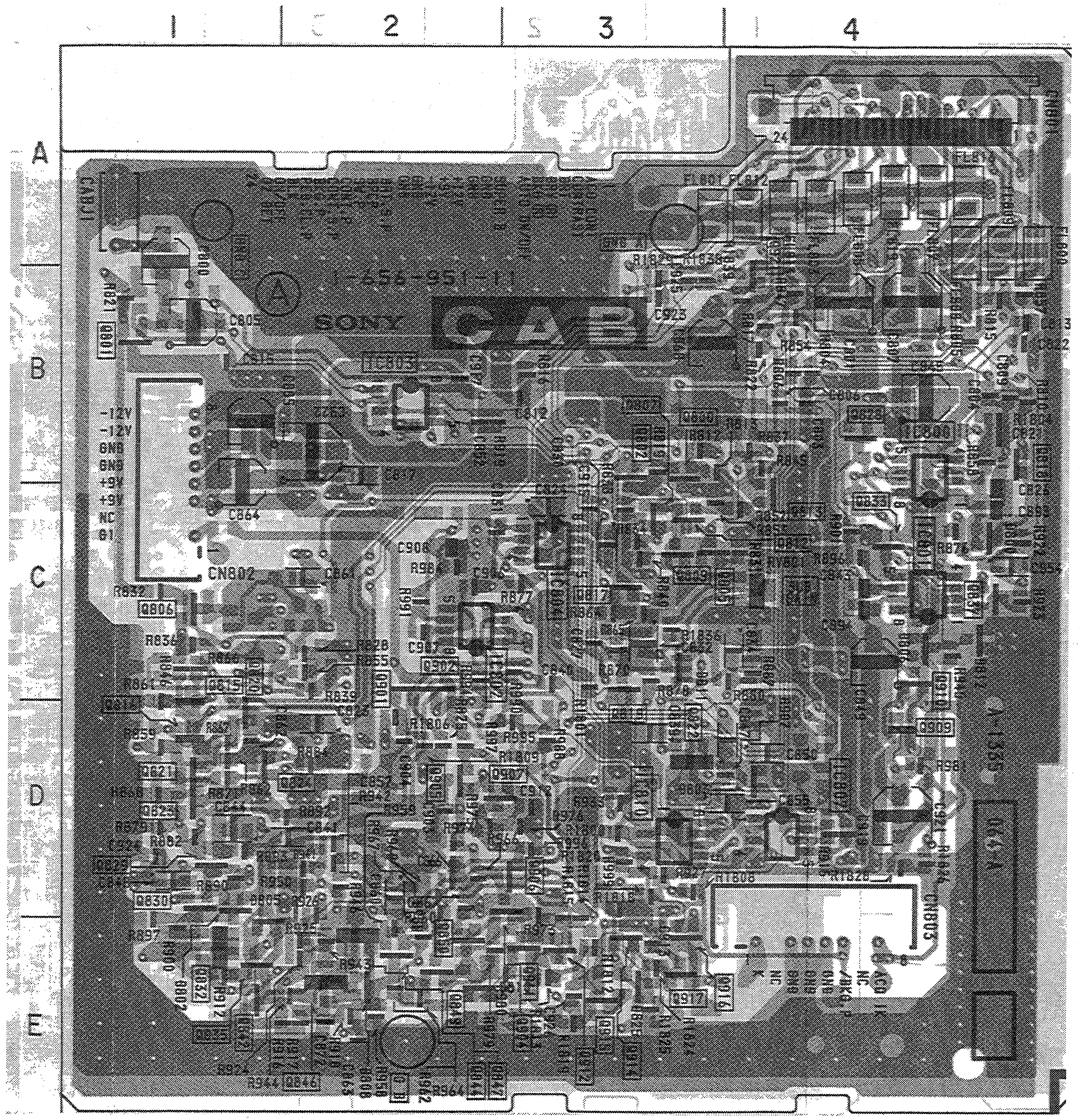
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

CAB [PRE AMP]

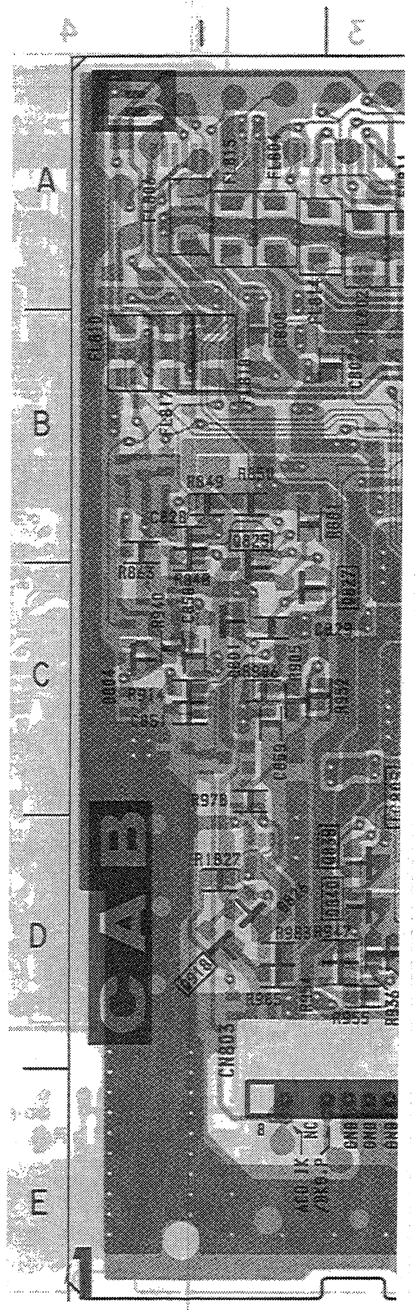
CAB BOARD (COMPONENT SIDE)

IC	
IC800	B-4
IC801	C-4
IC802	C-2
IC803	B-2
IC804	C-3
IC806	D-3
IC807	D-4
TRANSISTOR	
Q800	B-3
Q801	B-1
Q802	B-3
Q805	C-3
Q806	C-1
Q807	C-3
Q809	C-3
Q812	C-3
Q813	C-4
Q815	C-1
Q816	D-1
Q817	C-3
Q818	B-4
Q819	C-3
Q820	D-1
Q821	D-1
Q822	D-3
Q823	D-1
Q824	D-1
Q828	B-4
Q829	D-1
Q830	D-1
Q832	E-1
Q833	C-4
Q835	E-1
Q837	C-4
Q842	E-1
Q844	E-2
Q846	E-2
Q847	E-2
Q849	E-2
Q850	E-2
Q901	C-2
Q902	C-2
Q904	E-3
Q905	D-2
Q906	D-3
Q907	D-2
Q909	D-4
Q910	C-4
Q911	E-3
Q912	E-3
Q914	E-3
Q915	E-3
Q916	E-3
Q917	E-3
Q921	B-4
DIODE	
D800	C-4
D802	D-1
D803	D-4
D805	D-1
D806	C-4
D808	E-2
D810	E-3
D811	C-3
D812	C-4
D825	E-3
VARIABLE RESISTOR	
RV801	C-4

– CAB BOARD – <Component Side>

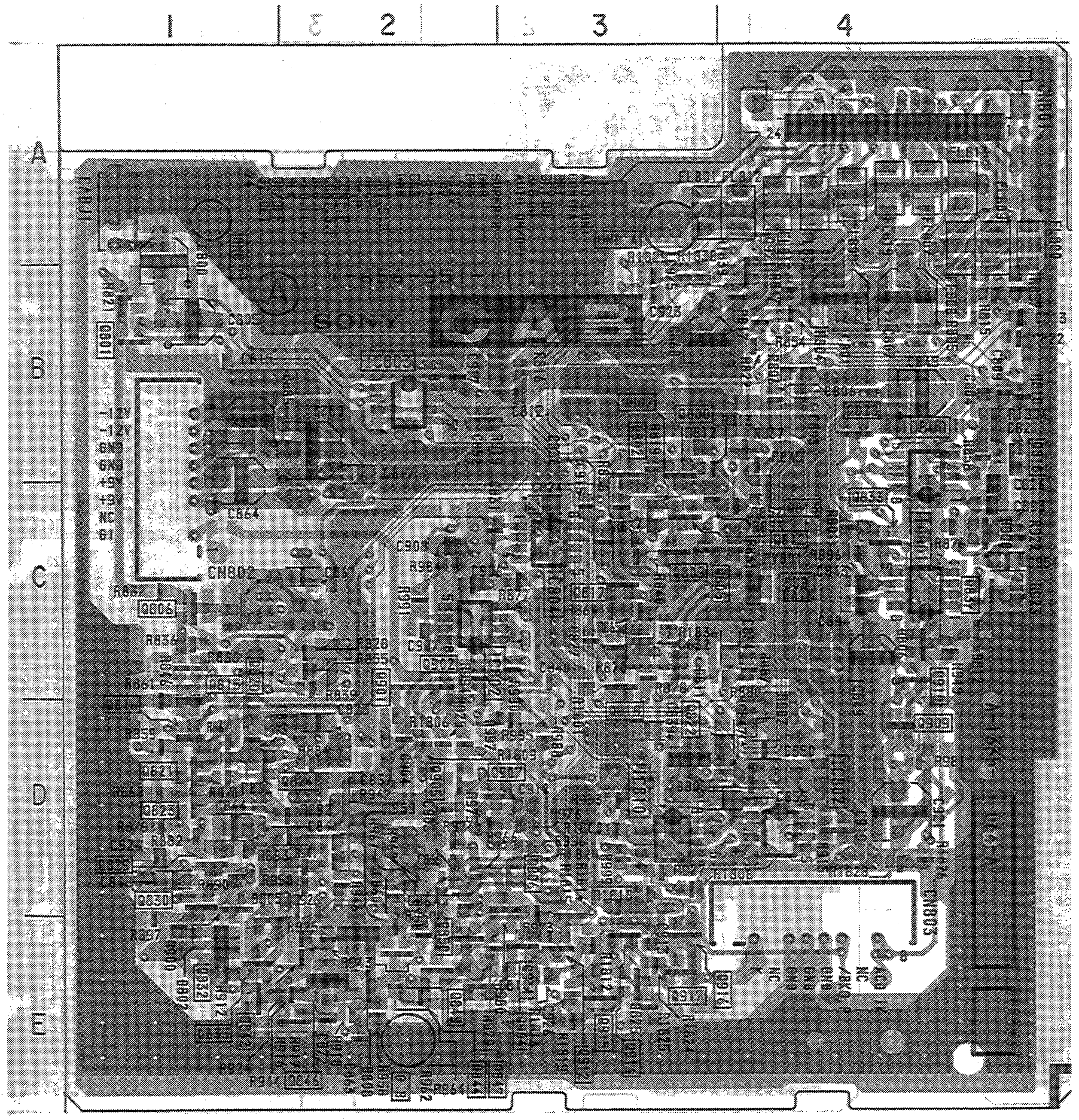

1
2
3
4
A
B
C
D
E
CAB
SONY
1-658-951-11
A-1365
CN802
CN803
-12V
-12V
GND
GND
+9V
+9V
NC
B1

<Conductor Side>

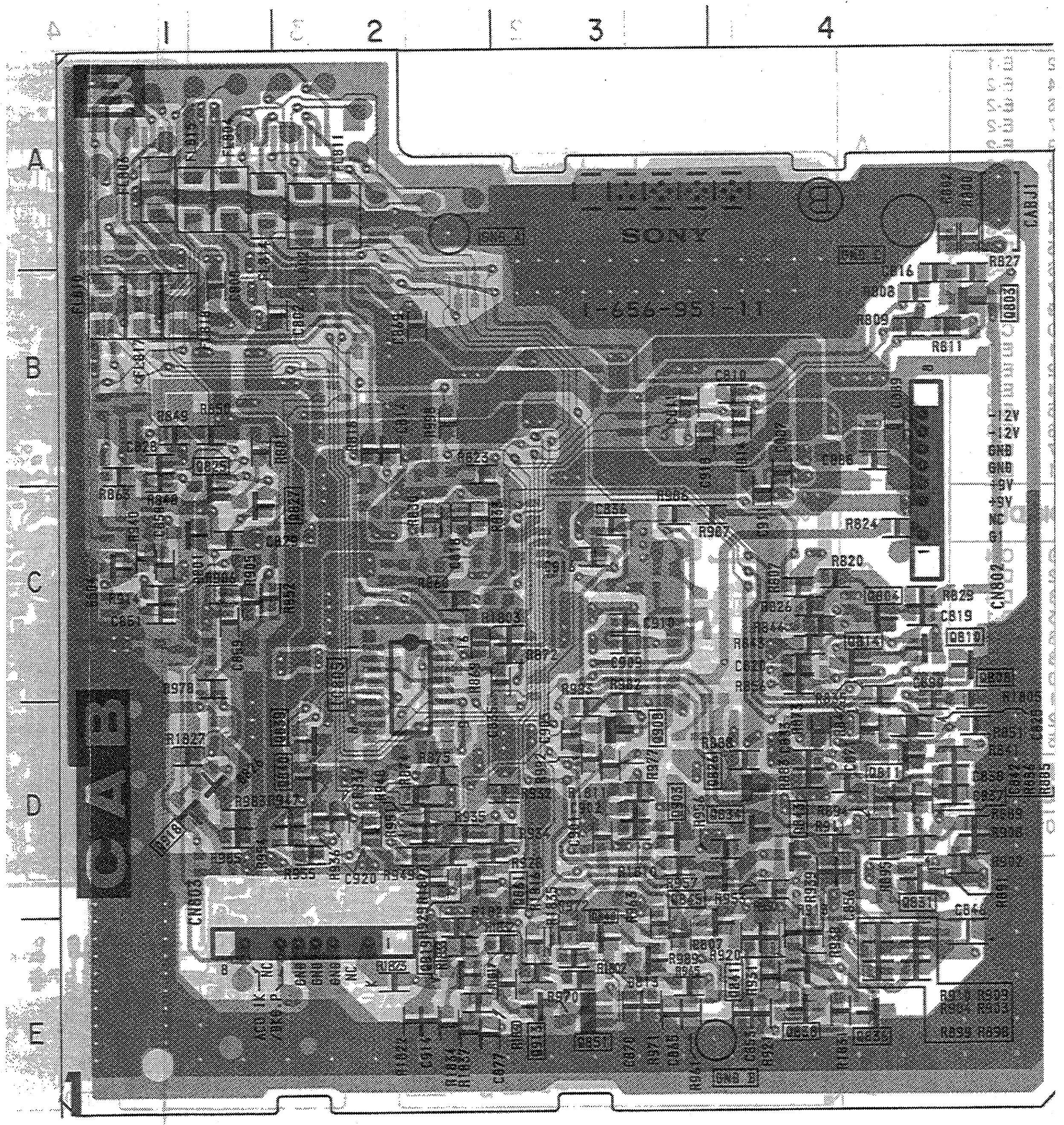

4
1
3
A
B
C
D
E
CAB
CN803

CAB [PRE AMP]

– CAB BOARD – <Component Side>


1
2
3
4
A
B
C
D
E
CAB
SONY
1-656-951-11
A-1335
CN802
CN803
-12V
-12V
GND
GND
+9V
+9V
NC
B1

<Conductor Side>


1
2
3
4
A
B
C
D
E
CAB
SONY
1-656-951-11
CN802
CN803
CABJ1

CAB BOARD (CONDUCTOR SIDE)

IC	
IC805	C-2
TRANSISTOR	
Q803	B-4
Q804	C-4
Q808	C-4
Q810	C-4
Q811	D-4
Q814	C-4
Q825	B-1
Q826	D-4
Q827	C-1
Q831	D-4
Q834	D-4
Q836	E-4
Q838	E-4
Q839	D-2
Q840	D-2
Q841	E-4
Q843	D-4
Q845	D-3
Q848	E-3
Q851	E-3
Q861	D-2
Q903	D-3
Q908	D-3
Q913	E-3
Q918	D-1
Q919	E-2
DIODE	
D801	C-1
D804	C-1
D807	E-3
D813	E-3
D826	D-1

- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

PA [HIGH VOLTAGE GEN.]

PA BOARD

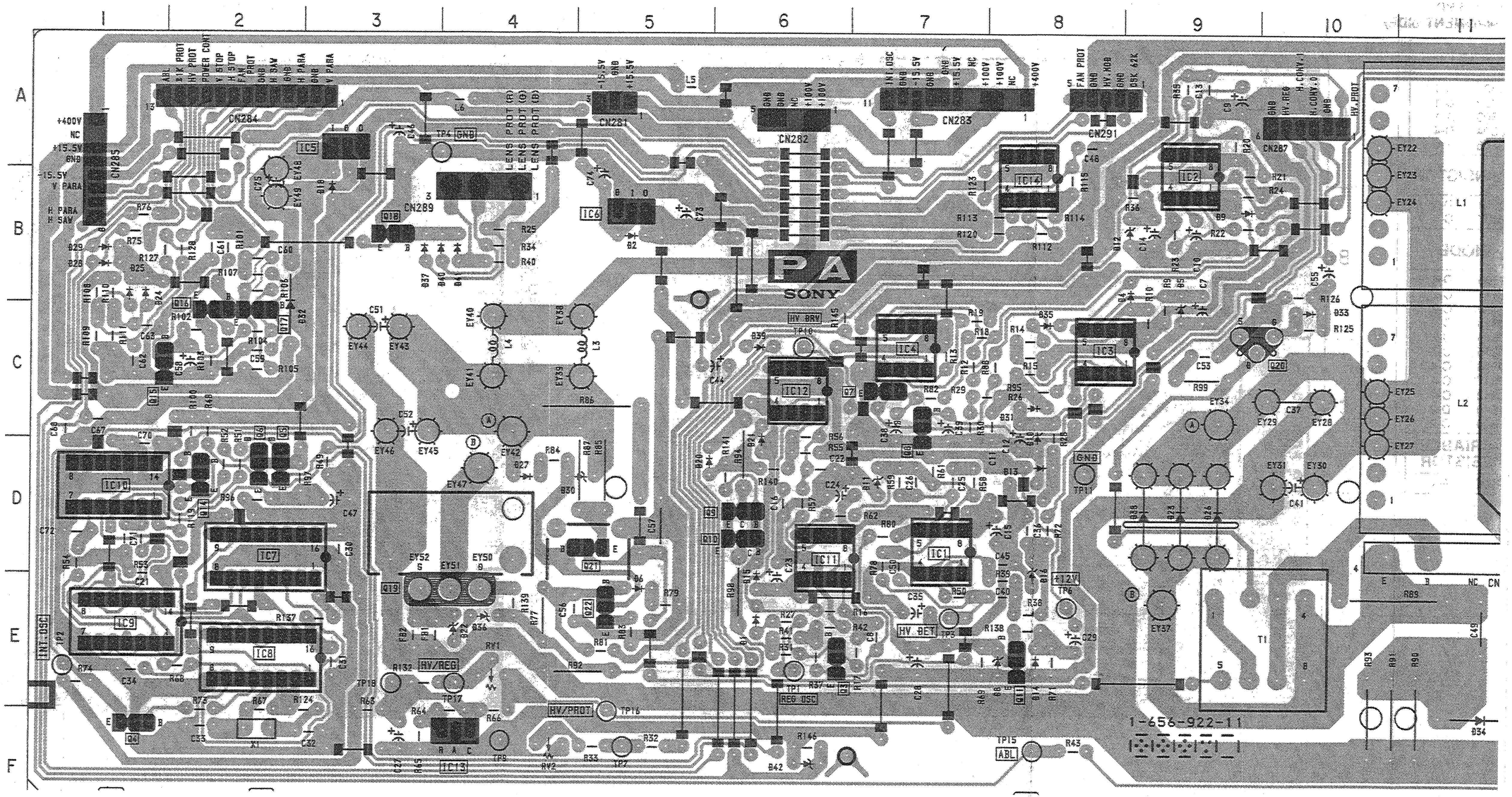
IC	
IC1	D-7
IC2	B-9
IC3	C-8
IC4	C-7
IC5	A-3
IC6	B-5
IC7	D-2
IC8	E-2
IC9	E-1
IC10	D-1
IC11	D-6
IC12	C-6
IC13	F-4
IC14	B-8

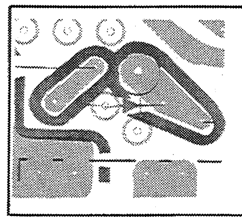
TRANSISTOR	
Q1	B-13
Q2	A-13
Q3	E-6
Q4	F-1
Q5	D-2
Q6	D-2
Q7	C-7
Q8	C-7
Q9	D-6
Q10	D-6
Q11	E-8
Q14	D-2
Q15	C-1
Q16	C-2
Q17	C-2
Q18	B-3
Q19	E-3
Q20	C-10
Q21	D-5
Q22	E-5

DIODE	
D1	E-6
D2	B-5
D3	A-13
D4	C-9
D5	C-9
D6	E-5
D8	E-8
D9	C-9
D10	C-8
D11	D-7
D12	B-9
D13	D-8
D14	E-8
D15	E-6
D16	D-8
D17	E-12
D18	B-3
D19	E-12
D20	D-5
D21	D-6
D22	E-4
D23	D-9
D24	B-1
D25	B-1
D26	D-9
D27	D-4
D28	B-1
D29	B-1
D30	D-4
D31	C-8
D32	C-2
D33	C-10
D34	F-11
D35	C-8
D36	E-4
D37	B-3
D38	D-9
D39	C-6
D40	B-3
D41	B-4
D42	F-6

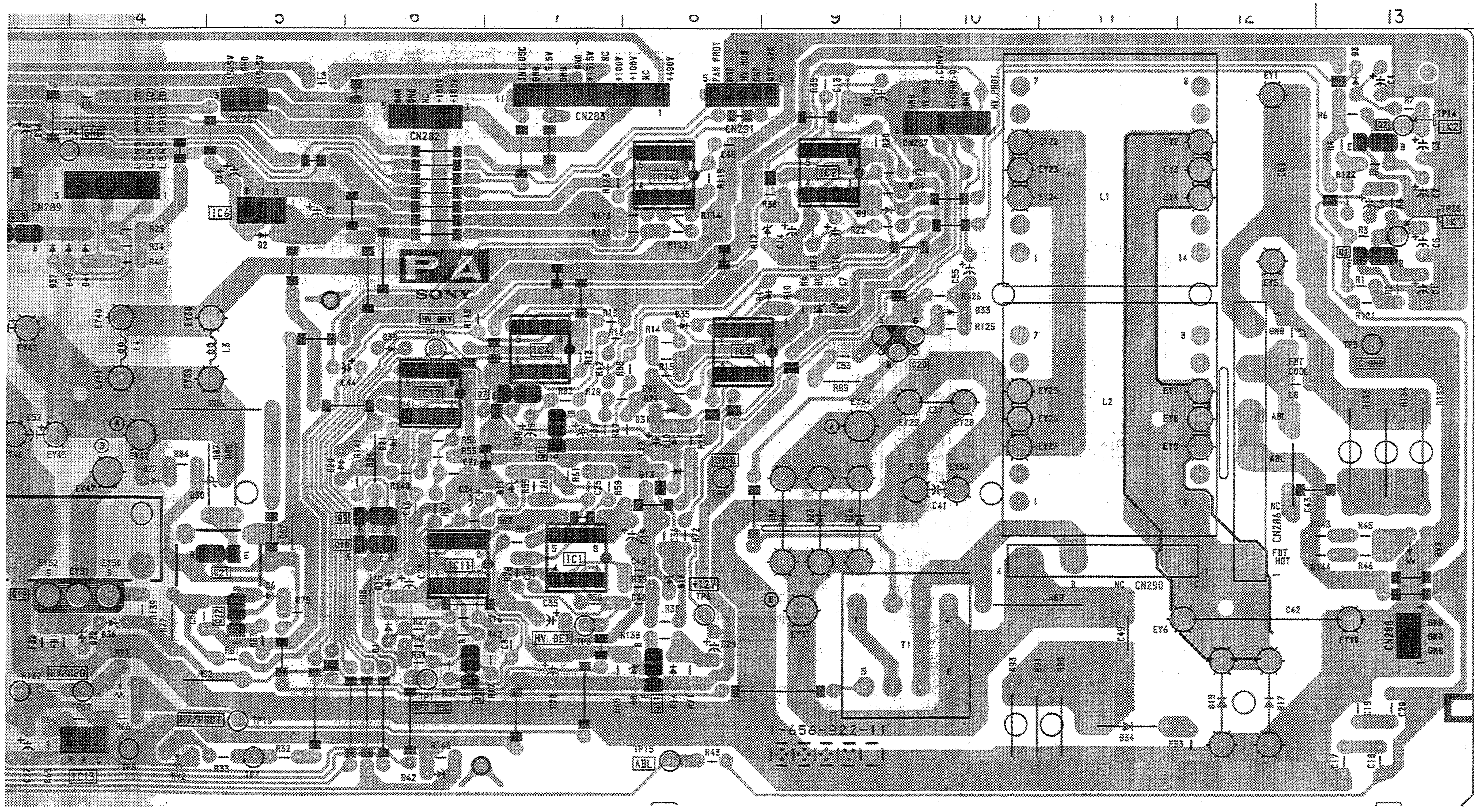
VARIABLE RESISTOR	
RV1	E-4
RV2	F-4
RV3	D-13

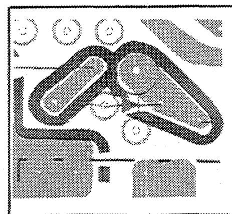
– PA BOARD –


1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
CN281
CN282
CN283
CN284
CN285
CN287
CN289
CN291
+400V
NC
+15.5V
GND
-15.5V
V PARA
H PARA
H SAW
P A
SONY
HV DRV
HV BET
HV/REG
HV/PROT
REG OSC
INT OSC
ABL
+12V
GND
1-656-922-11



NOTE:
The circuit indi
600 Vp-p. Care
inspection or re


4
5
6
7
8
9
10
11
12
13
PA
SONY
CN281
CN282
CN283
CN291
CN287
CN289
CN290
CN286
CN288
IC1
IC2
IC3
IC4
IC6
IC11
IC12
IC13
IC14
L1
L2
T1
HV BRV
HV/REG
HV/PROT
HV DET
REG OSC
+12V
ABL
C.GND
FBT COOL
FBT HOT
LENS PROT (R)
LENS PROT (G)
LENS PROT (B)
FAN PROT
HV.PROT
-15.5V
GND
+15.5V
+100V
NC
+400V
INT OSC
1-656-922-11



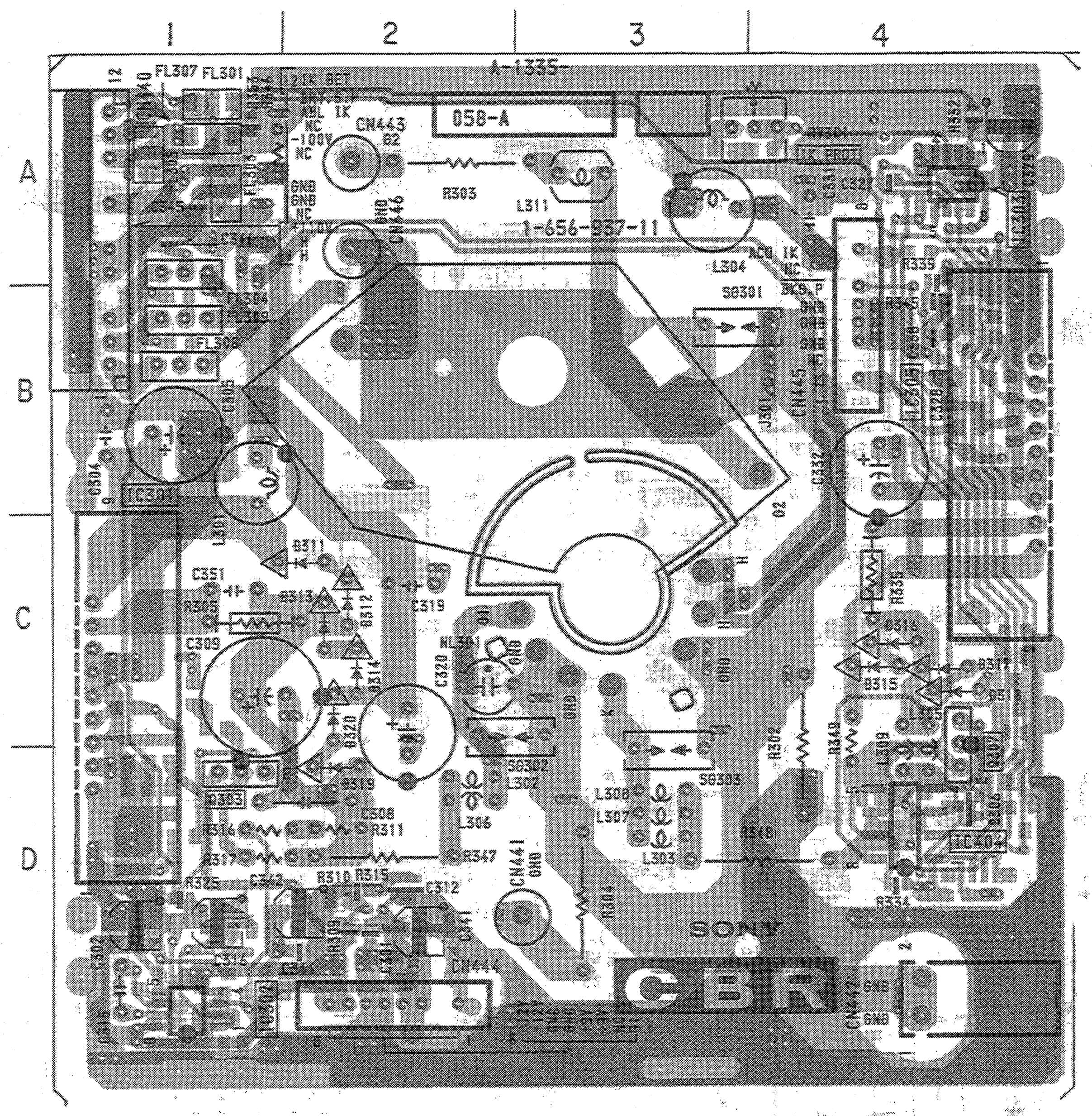
NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

CBR [VIDEO OUT R]

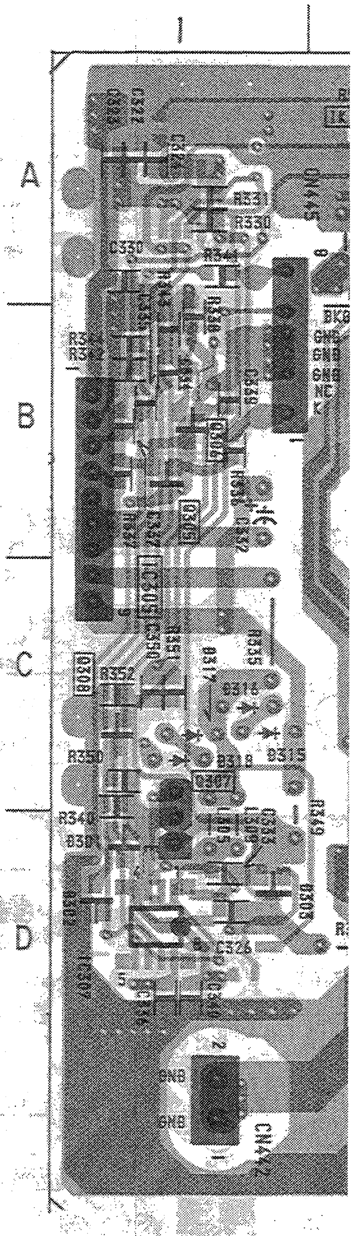
**CBR BOARD
(COMPONENT SIDE)**

IC	
IC301	C-1
IC302	D-1
IC303	A-4
IC304	D-4
IC305	B-4
TRANSISTOR	
Q303	D-1
Q307	C-4
DIODE	
D306	D-4
D311	C-2
D312	C-2
D313	C-2
D314	C-2
D315	C-4
D316	C-4
D317	C-4
D318	C-4
D319	D-2
D320	C-2
VARIABLE RESISTOR	
RV301	A-4

– CBR BOARD – <Component Side>


1
2
3
4
A
B
C
D
A-1335-
058-A
1-656-937-11
CN443
CN446
CN445
CN441
CN442
CN444
RV301
IK PROT
L311
R303
L304
SG301
SG302
SG303
IC301
IC303
IC304
Q303
Q307
C305
C309
C320
C332
D311
D312
D313
D314
D315
D316
D317
D318
D319
D320
NL301
SONY
CBR

<Conductor Side>

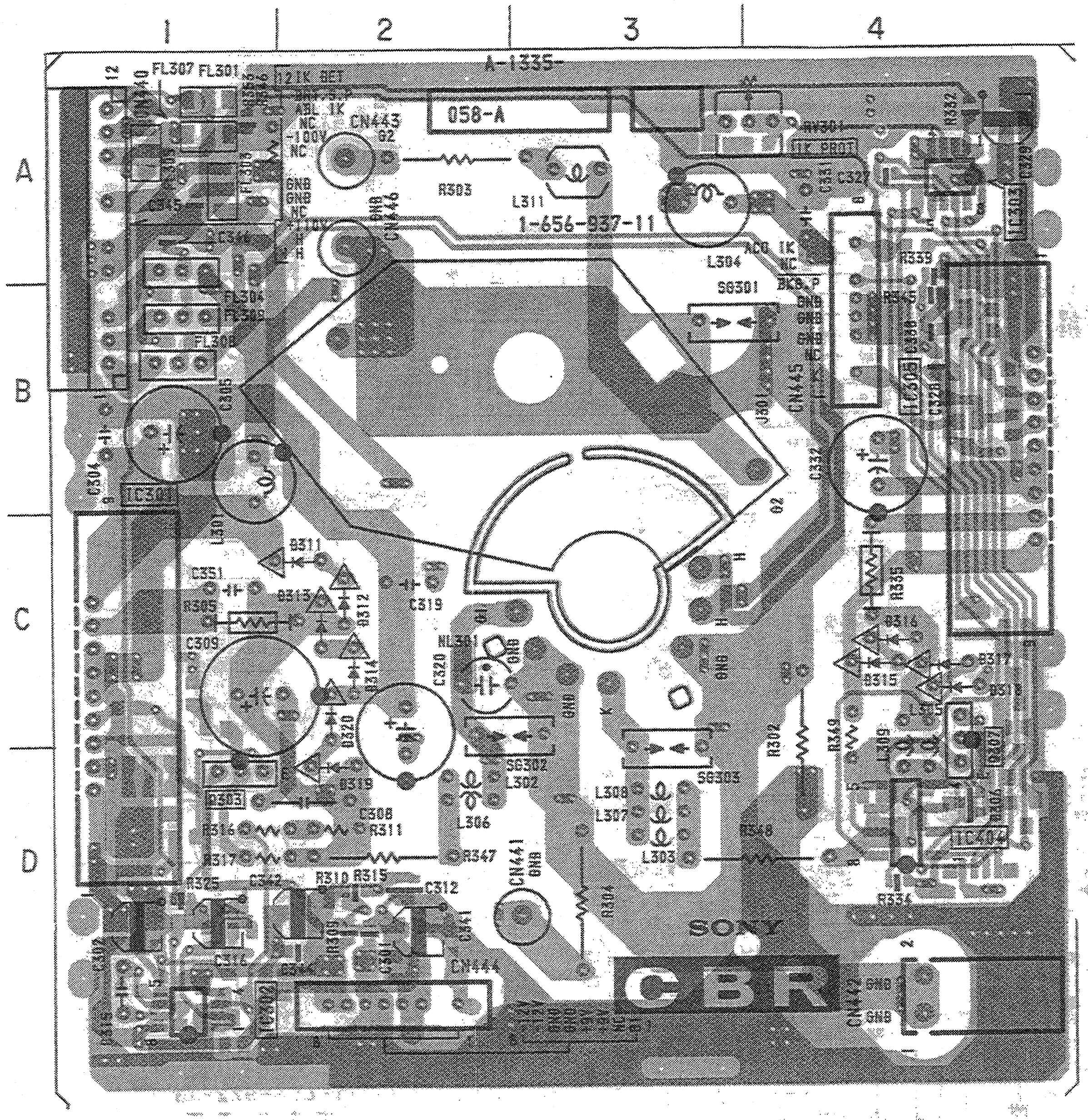

1
A
B
C
D
CN445
CN442
GND

CBR [VIDEO OUT R]

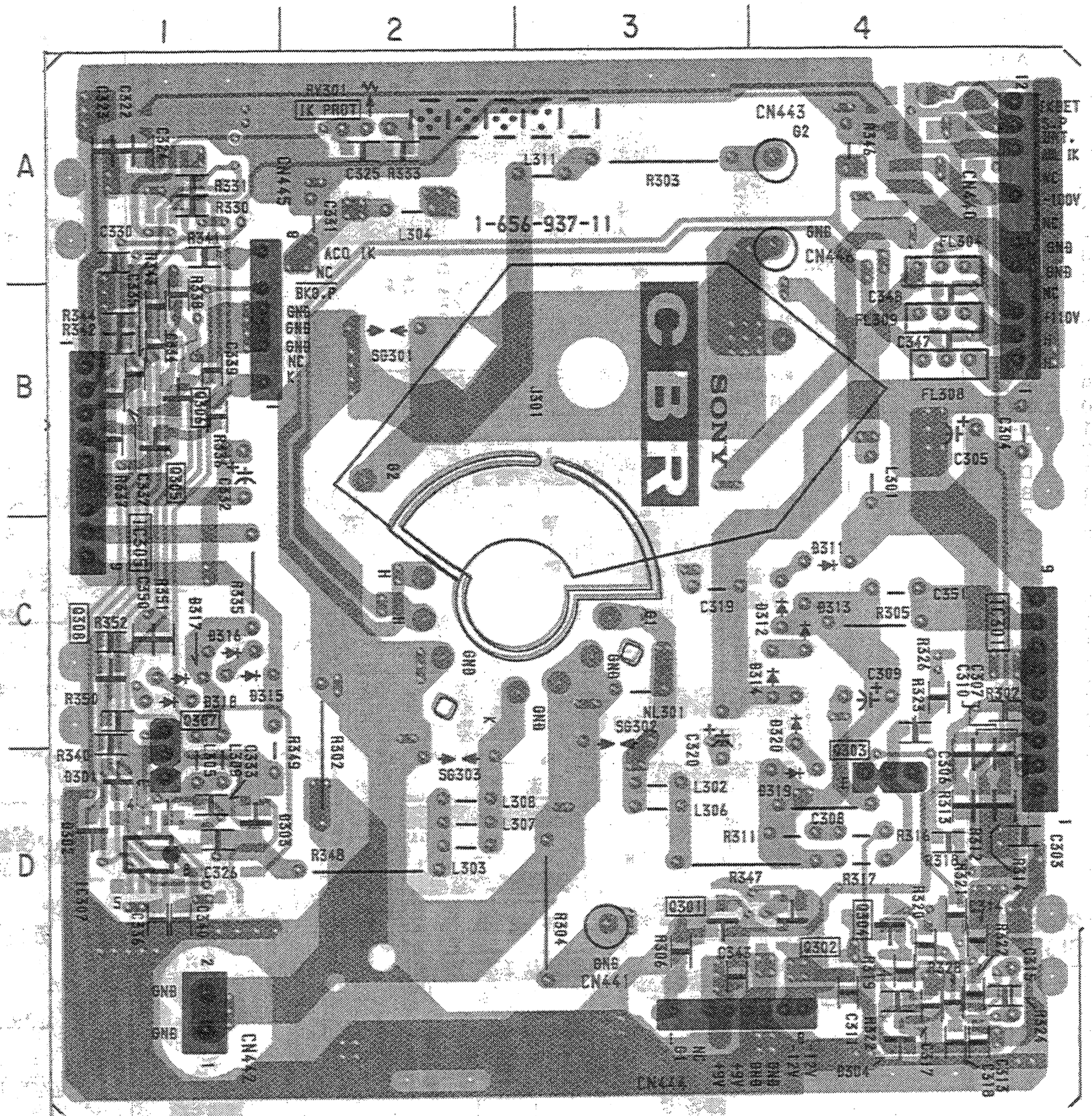
BR BOARD
OMPONENT SIDE)

IC	
IC301	C-1
IC302	D-1
IC303	A-4
IC304	D-4
IC305	B-4
RANSISTOR	
Q303	D-1
Q307	C-4
DIODE	
D306	D-4
D311	C-2
D312	C-2
D313	C-2
D314	C-2
D315	C-4
D316	C-4
D317	C-4
D318	C-4
D319	D-2
D320	C-2
VARIABLE RESISTOR	
RV301	A-4

– CBR BOARD – <Component Side>


1
2
3
4
A
B
C
D
A-1335-
058-A
1-656-937-11
CN443
CN445
CN446
CN441
CN442
CN444
RV301
IK PROT
IC301
IC302
IC303
IC304
IC305
SONY
CBR

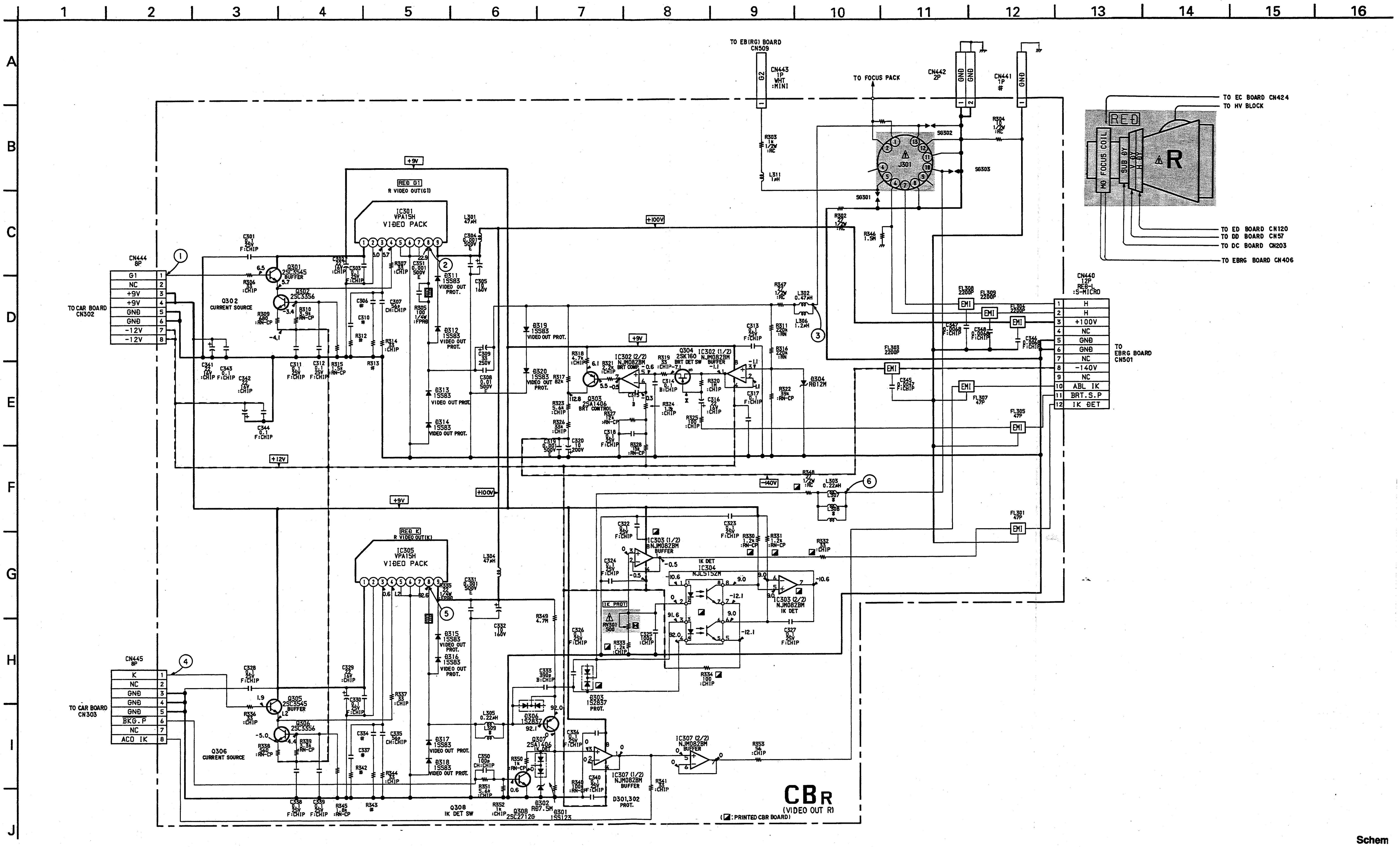
<Conductor Side>

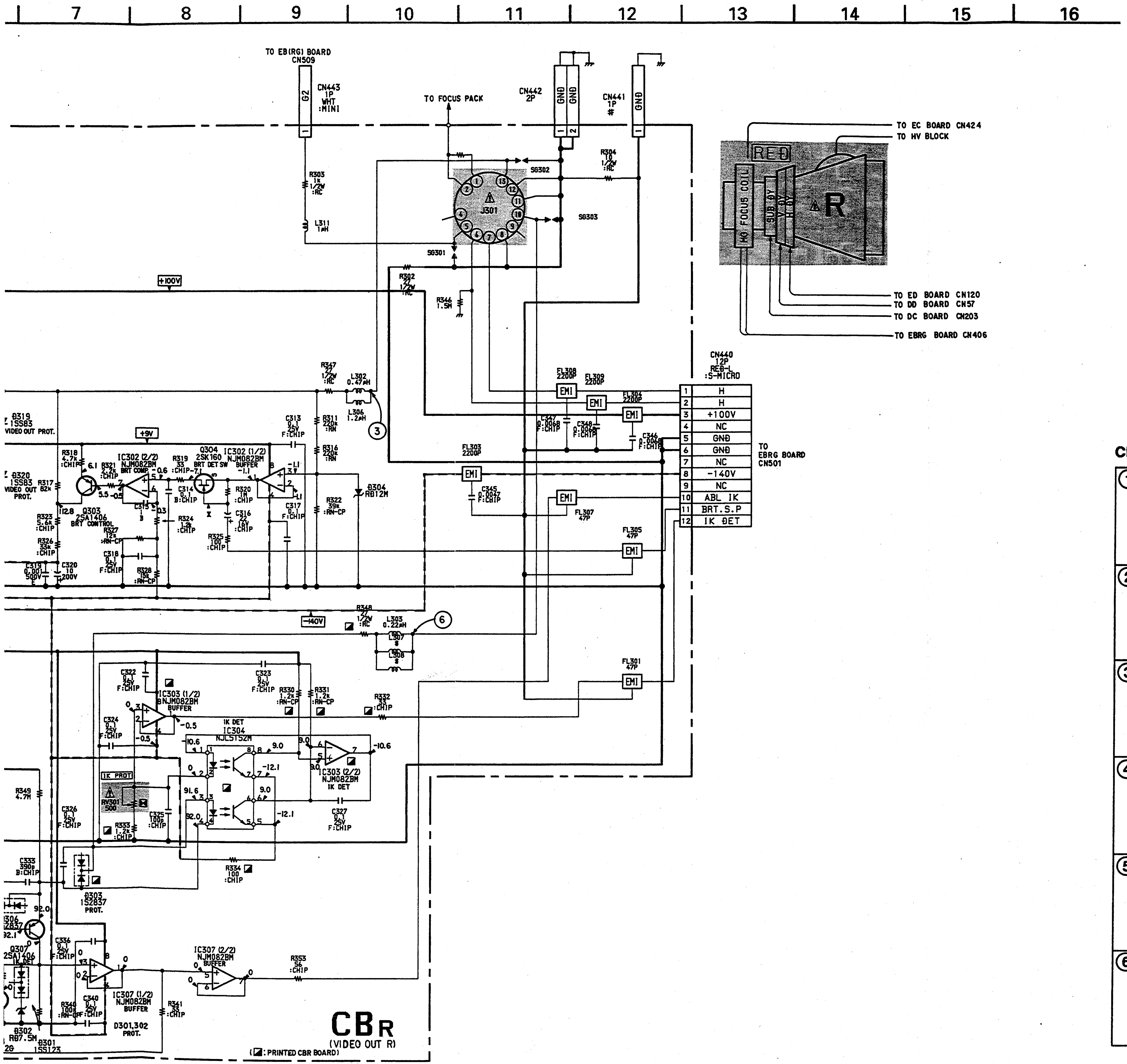

1
2
3
4
A
B
C
D
1-656-937-11
CN443
CN445
CN441
CN442
CN444
RV301
IK PROT
IC301
IC305
IC307
SONY
CBR

CBR BOARD
(CONDUCTOR SIDE)

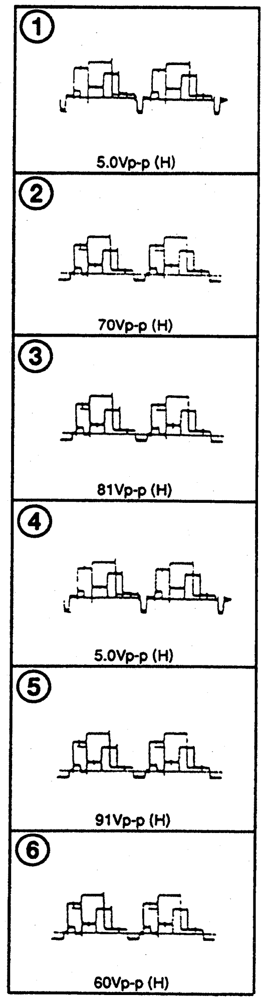
IC	
IC301	C-4
IC305	B-1
IC307	D-1
TRANSISTOR	
Q301	D-3
Q302	D-4
Q303	D-4
Q304	D-4
Q305	B-1
Q306	B-1
Q307	C-1
Q308	C-1
DIODE	
D301	D-1
D302	D-1
D303	D-1
D304	D-4
D311	C-4
D312	C-4
D313	C-4
D314	C-4
D315	C-1
D316	C-1
D317	C-1
D318	C-1
D319	D-4
D320	C-4
VARIABLE RESISTOR	
RV301	A-2

- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.


TO EB(RG) BOARD CN509
CN443 1P WHT :MINI
TO FOCUS PACK
CN442 2P
CN441 1P
TO EC BOARD CN424
TO HV BLOCK
RED
FOCUS COIL
SUB DY
V DY
H DY
R
TO ED BOARD CN120
TO DD BOARD CN57
TO DC BOARD CN203
TO EBRG BOARD CN406
J301
SG301
SG302
SG303
IC301 VPA15H VIDEO PACK
RED G1 R VIDEO OUT(G1)
IC305 VPA15H VIDEO PACK
RED K R VIDEO OUT(K)
CN444 8P
G1
NC
+9V
+9V
GND
GND
-12V
-12V
TO CAR BOARD CN302
CN445 8P
K
NC
GND
GND
GND
BKG.P
NC
ACO IK
TO CAR BOARD CN303
Q301 2SC3545 BUFFER
Q302 2SC3356
Q302 CURRENT SOURCE
Q305 2SC3545 BUFFER
Q306 2SC3356
Q306 CURRENT SOURCE
IC302 (2/2) NJM082BM BRT COMP
Q304 2SK160 BRT DET SW
IC302 (1/2) NJM082BM BUFFER
Q303 2SA1406 BRT CONTROL
IC303 (1/2) NJM082BM BUFFER
IC304 NJL5152M IK DET
IC303 (2/2) NJM082BM IK DET
IK PROT
RV301 500
IC307 (2/2) NJM082BM BUFFER
IC307 (1/2) NJM082BM BUFFER
Q307 2SA1406 IK DET
Q308 2SC2712G IK DET SW
D301,302 PROT.
D303 1S2837 PROT.
D306 1S2837
CN440 12P RED-L :S-MICRO
H
H
+100V
NC
GND
GND
NC
-140V
NC
ABL IK
BRT.S.P
IK DET
TO EBRG BOARD CN501
+9V
+12V
+100V
-140V
CBR
(VIDEO OUT R)
(: PRINTED CBR BOARD)


7
8
9
10
11
12
13
14
15
16
TO EB(RG) BOARD CN509
G2
CN443 1P WHT :MINI
TO FOCUS PACK
CN442 2P
GND
GND
CN441 1P
GND
R303 1k 1/2W :RC
L311 1mH
R304 10 1/2W :RC
J301
S6302
S6303
S0301
R302 1k 1/2W :RC
R346 1.5M
+100V
TO EC BOARD CN424
TO HV BLOCK
RED
FOCUS COIL
HD
SUB DY
V DY
H DY
R
TO ED BOARD CN120
TO DD BOARD CN57
TO DC BOARD CN203
TO EBRG BOARD CN406
CN440 12P REB-L :S-MICRO
1 H
2 H
3 +100V
4 NC
5 GND
6 GND
7 NC
8 -140V
9 NC
10 ABL IK
11 BRT.S.P
12 IK DET
TO EBRG BOARD CN501
FL308 2200P
FL309 2200P
FL302 2200P
FL303 2200P
FL307 47P
FL305 47P
FL301 47P
EMI
R347 27 1/2W :RC
L302 0.47µH
L306 1.2µH
③
D319 1SS83 VIDEO OUT PROT.
D320 1SS83 VIDEO OUT PROT.
+9V
IC302 (2/2) NJM082BM BRT COMP
Q304 2SK160 BRT DET SW
IC302 (1/2) NJM082BM BUFFER
Q303 2SA1406 BRT CONTROL
D304 RD12M
-140V
R348 27 1/2W :RC
L303 0.22µH
⑥
IC303 (1/2) NJM082BM BUFFER
IK DET IC304 NJL5152M
IC303 (2/2) NJM082BM IK DET
IK PROT
RV301 500
D303 1S2837 PROT.
IC307 (2/2) NJM082BM BUFFER
IC307 (1/2) NJM082BM BUFFER
D301,302 PROT.
D302 RB7.5M
D301 1SS123
CBR
(VIDEO OUT R)
(◪: PRINTED CBR BOARD)

CBR BOARD



Schematic diagram

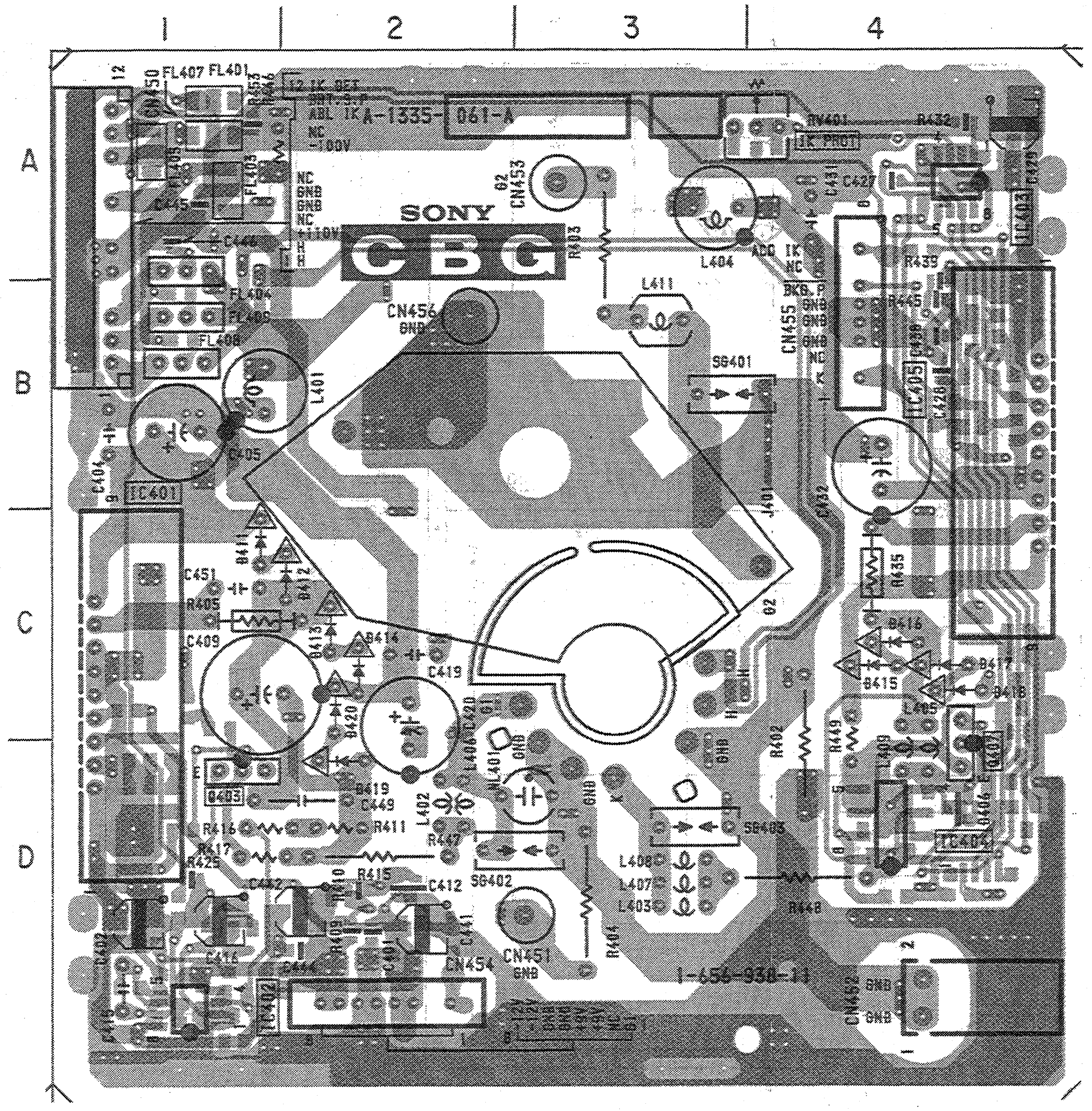
← CBR board

CBG [VIDEO OUT G]

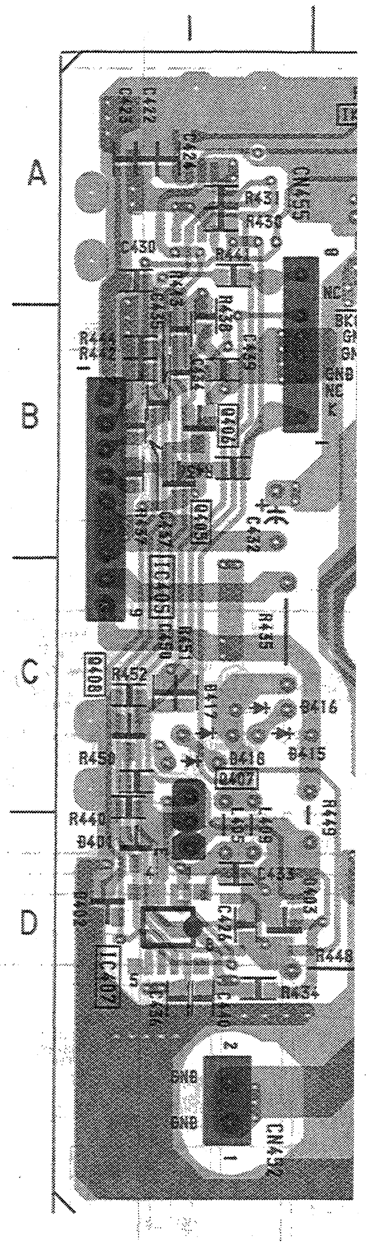
CBG BOARD (COMPONENT SIDE)

IC	
IC401	C-1
IC402	D-1
IC403	A-4
IC404	D-4
IC405	B-4
TRANSISTOR	
Q403	D-1
Q407	D-4
DIODE	
D406	D-4
D411	C-1
D412	C-2
D413	C-2
D414	C-2
D415	C-4
D416	C-4
D417	C-4
D418	C-4
D419	D-2
D420	C-2
VARIABLE RESISTOR	
RV401	A-4

– CBG BOARD – <Component Side>


1
2
3
4
A
B
C
D
SONY
CBG
A-1335-061-A
1-656-938-11
CN450
CN451
CN452
CN453
CN454
CN455
CN456
IC401
IC402
IC403
IC404
IC405
RV401
IK PROT
SG401
SG402
SG403
L401
L404
L411
FL401
FL407
FL404
FL405
FL406
C405
C409
C419
C451
R403
R404
R405
R411
R415
R416
R448
Q403
Q407

<Conductor Side>

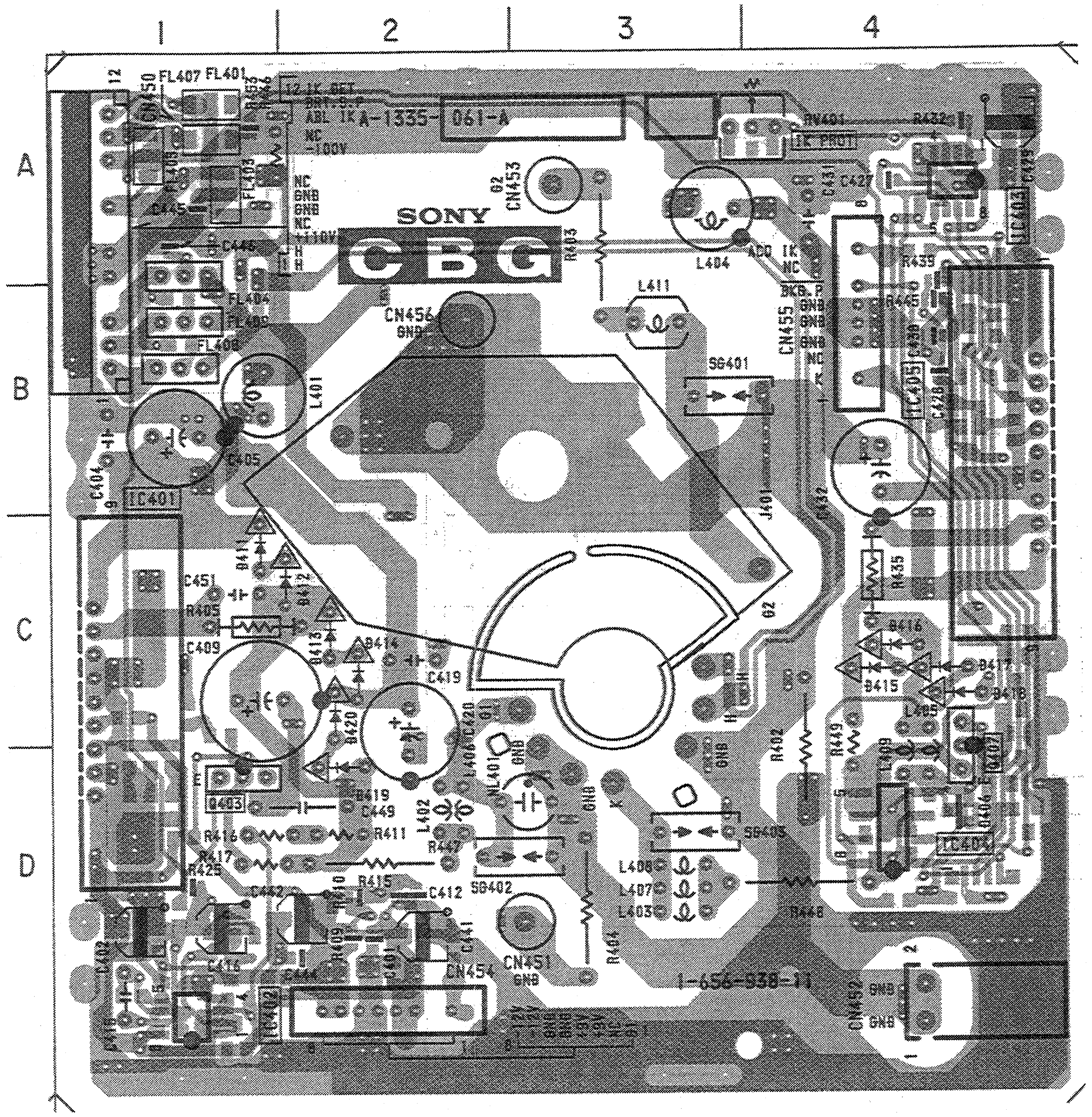

1
A
B
C
D
CN452
IC402
R435
R452
R450
R440
R448
R434
Q407

CBG [VIDEO OUT G]

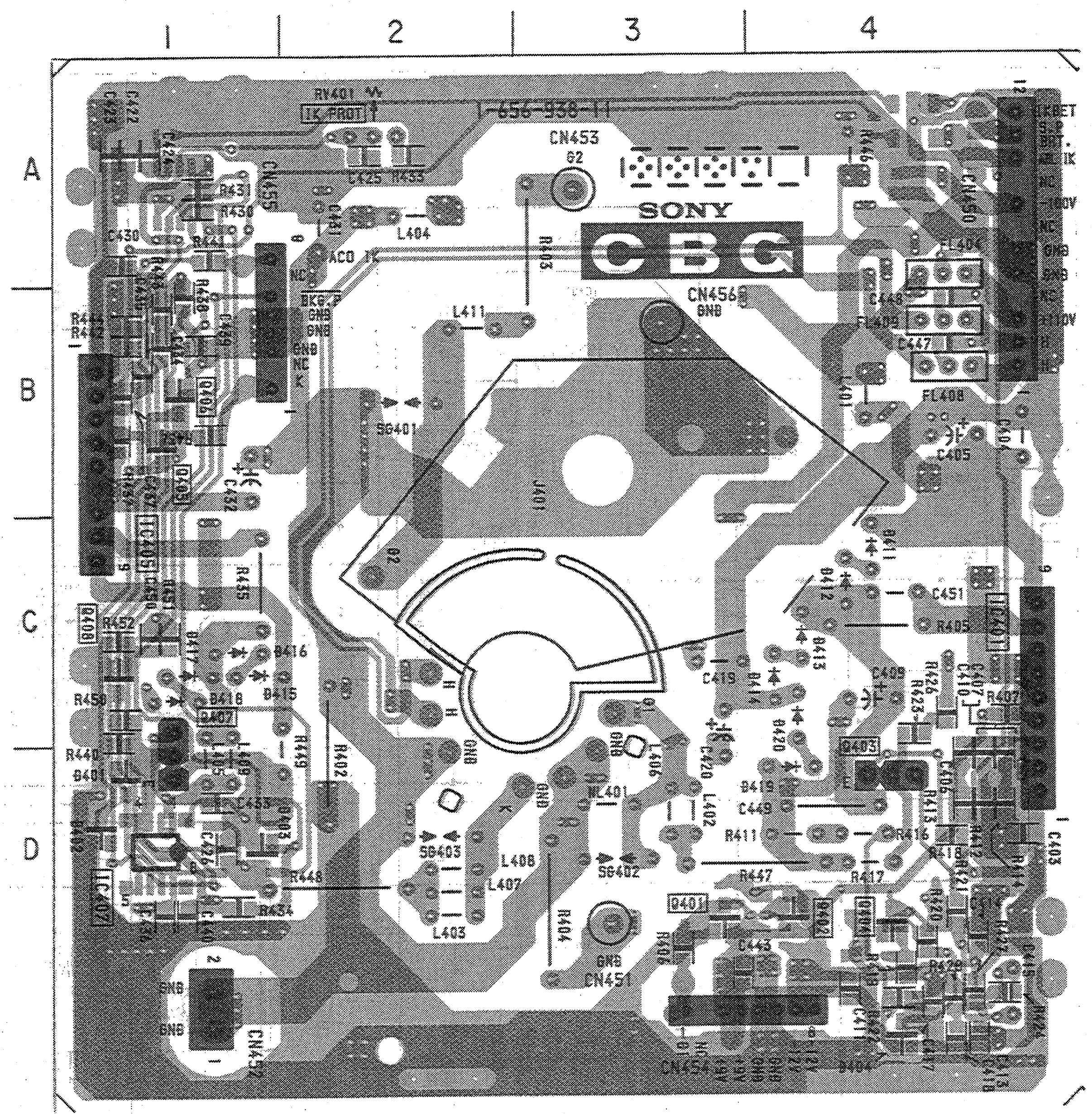
**3G BOARD
OMPONENT SIDE)**

IC	
IC401	C-1
IC402	D-1
IC403	A-4
IC404	D-4
IC405	B-4
RANSISTOR	
Q403	D-1
Q407	D-4
DIODE	
D406	D-4
D411	C-1
D412	C-2
D413	C-2
D414	C-2
D415	C-4
D416	C-4
D417	C-4
D418	C-4
D419	D-2
D420	C-2
VARIABLE RESISTOR	
RV401	A-4

– CBG BOARD – <Component Side>


1
2
3
4
A
B
C
D
SONY
CBG
A-1335-061-A
1-656-938-11
CN453
CN456
CN451
CN454
CN452
CN455
IC401
IC402
IC403
IC404
IC405
Q403
Q407
RV401
IK PROT
SG401
SG402
SG403
L401
L404
L411
J401
G2
GND

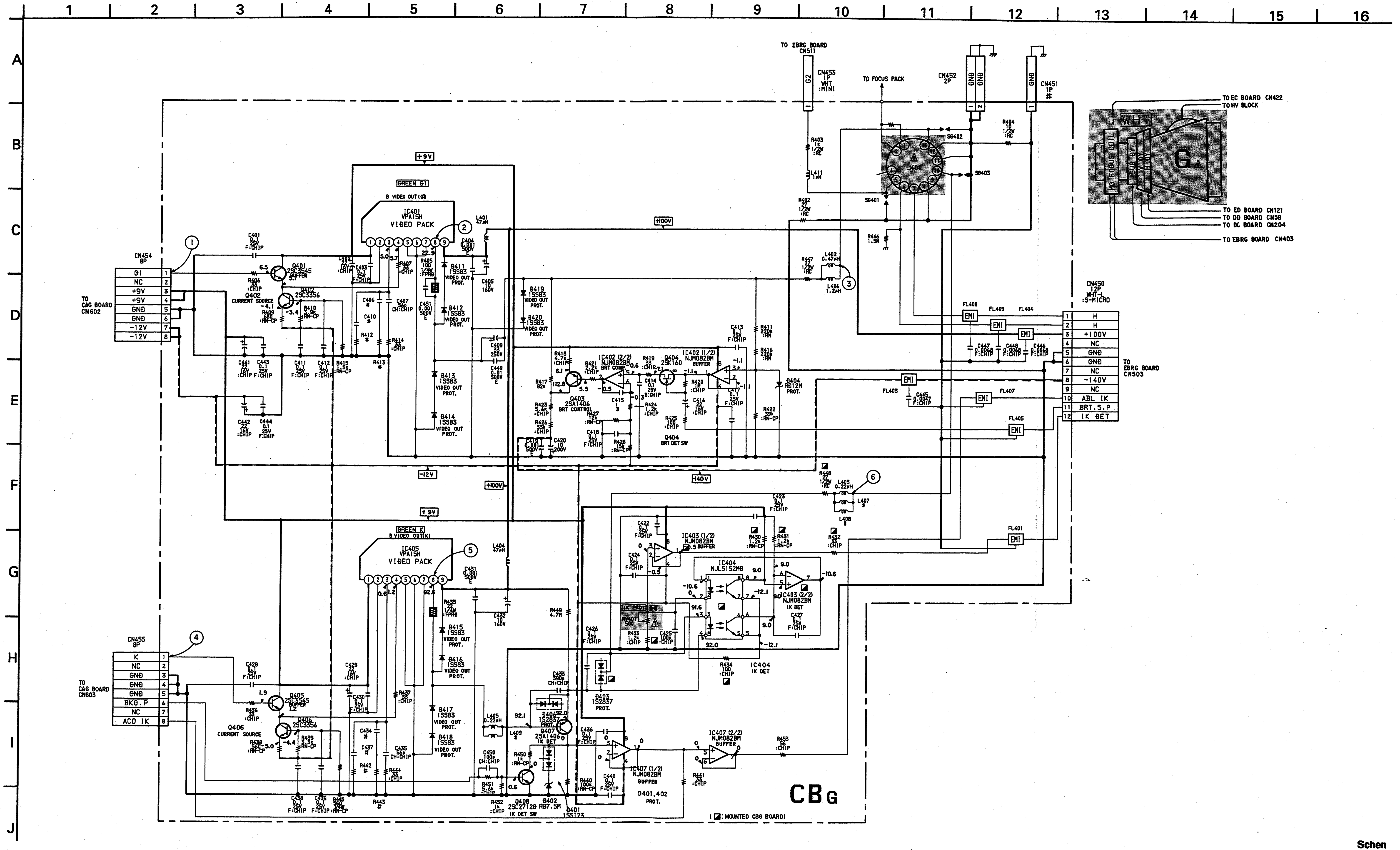
<Conductor Side>

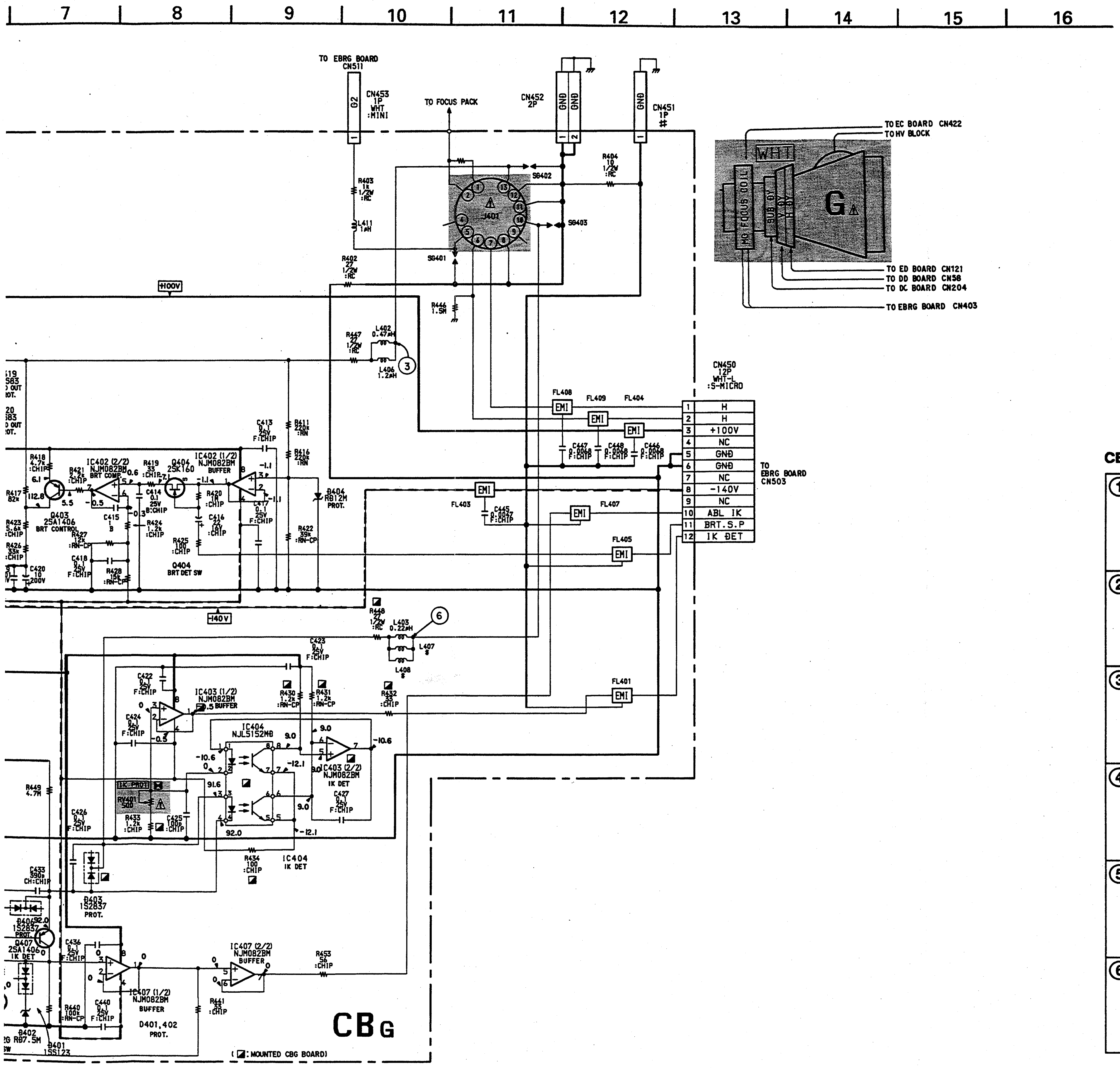

1
2
3
4
A
B
C
D
SONY
CBG
1-656-938-11
RV401
IK PROT
CN453
CN456
CN451
CN454
CN455
IC401
IC405
IC407
Q401
Q402
Q403
Q404
Q405
Q406
Q407
Q408
SG401
SG402
SG403
L401
L404
L411
J401
G2
GND

**CBG BOARD
(CONDUCTOR SIDE)**

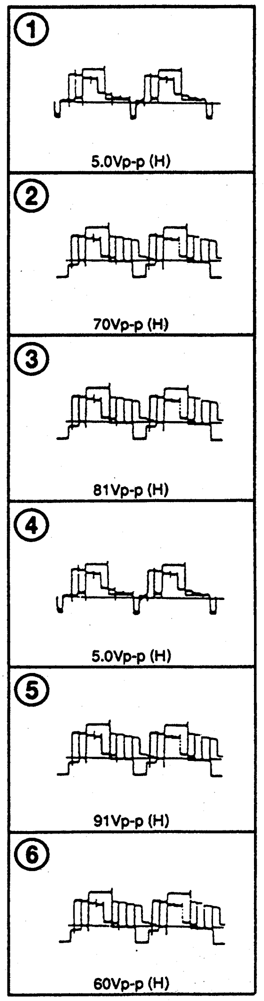
IC	
IC401	C-4
IC405	B-1
IC407	D-1
TRANSISTOR	
Q401	D-3
Q402	D-4
Q403	D-4
Q404	D-4
Q405	B-1
Q406	B-1
Q407	C-1
Q408	C-1
DIODE	
D401	D-1
D402	D-1
D403	D-1
D404	D-4
D411	C-4
D412	C-4
D413	C-4
D414	C-4
D415	C-1
D416	C-1
D417	C-1
D418	C-1
D419	D-4
D420	C-4
VARIABLE RESISTOR	
RV401	A-2

- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.


TO EBRG BOARD CN511
CN453 1P WHT :MINI
TO FOCUS PACK
CN452 2P
CN451 1P
TO EC BOARD CN422
TO HV BLOCK
TO ED BOARD CN121
TO DD BOARD CN58
TO DC BOARD CN204
TO EBRG BOARD CN403
WHT
G
FOCUS
SUB
V.DY
H.DY
+9V
GREEN G1
B VIDEO OUT(G)
IC401 VPA15H VIDEO PACK
+100V
CN454 8P
G1
NC
+9V
+9V
GND
GND
-12V
-12V
TO CAG BOARD CN602
Q401 2SC3545 BUFFER
Q402 2SC3356 CURRENT SOURCE
D411 1SS83 VIDEO OUT PROT.
D412 1SS83 VIDEO OUT PROT.
D413 1SS83 VIDEO OUT PROT.
D414 1SS83 VIDEO OUT PROT.
D419 1SS83 VIDEO OUT PROT.
D420 1SS83 VIDEO OUT PROT.
IC402 (2/2) NJM082BM BRT COMP
Q404 2SK160
IC402 (1/2) NJM082BM BUFFER
Q403 2SA1406 BRT CONTROL
Q404 BRT DET SW
D404 RD12M PROT.
CN450 12P WHT-L :S-MICRO
H
H
+100V
NC
GND
GND
NC
-140V
NC
ABL IK
BRT.S.P
IK DET
TO EBRG BOARD CN503
FL408
FL409
FL404
FL403
FL407
FL405
FL401
-12V
+100V
-140V
+9V
GREEN K
B VIDEO OUT(K)
IC405 VPA15H VIDEO PACK
IC403 (1/2) NJM082BM BUFFER
IC404 NJL5152MB
IC403 (2/2) NJM082BM IK DET
IK PROT
RV401 500
IC404 IK DET
CN455 8P
K
NC
GND
GND
GND
BKG.P
NC
ACO IK
TO CAG BOARD CN603
Q405 2SC3545 BUFFER
Q406 2SC3356 CURRENT SOURCE
D415 1SS83 VIDEO OUT PROT.
D416 1SS83 VIDEO OUT PROT.
D417 1SS83 VIDEO OUT PROT.
D418 1SS83 VIDEO OUT PROT.
D403 1S2837 PROT.
D406 1S2837 PROT.
Q407 2SA1406 IK DET
Q408 2SC2712G IK DET SW
D402 RD7.5M
D401 1SS123
IC407 (1/2) NJM082BM BUFFER
IC407 (2/2) NJM082BM BUFFER
D401,402 PROT.
CBG
(◪ : MOUNTED CBG BOARD)


7
8
9
10
11
12
13
14
15
16
TO EBRG BOARD CN511
CN453 1P WHT :MINI
TO FOCUS PACK
CN452 2P
CN451 1P
G2
GND
GND
GND
S9402
S9403
S9401
J401
R403 1k 1/2W :RC
L411 1μH
R402 22 1/2W :RC
R404 10 1/2W :RC
R446 1.5M
TO EC BOARD CN422
TO HV BLOCK
WHT
H3
FOCUS
G2
G1
BUS
G
TO ED BOARD CN121
TO DD BOARD CN58
TO DC BOARD CN204
TO EBRG BOARD CN403
100V
R447 22 1/2W :RC
L402 0.47μH
L406 1.2μH
③
CN450 12P WHT-L :S-MICRO
FL408
FL409
FL404
FL403
FL407
FL405
FL401
EMI
1 H
2 H
3 +100V
4 NC
5 GND
6 GND
7 NC
8 -140V
9 NC
10 ABL IK
11 BRT.S.P
12 IK DET
TO EBRG BOARD CN503
C447 0.0068 F:CHIP
C448 0.0068 F:CHIP
C446 0.0068 F:CHIP
C445 0.0047 F:CHIP
IC402 (2/2) NJM082BM BRT COMP
IC402 (1/2) NJM082BM BUFFER
Q404 2SK160
Q403 2SA1406 BRT CONTROL
Q404 BRT DET SW
R404 RB12M PROT.
R411 220k :RN
R416 220k :RN
R422 39k :RN-CP
C413 0.1 25V F:CHIP
-140V
R448 22 1/2W :RC
L403 0.22μH
L407
L408
⑥
IC403 (1/2) NJM082BM BUFFER
IC404 NJL5152M8
IC403 (2/2) NJM082BM IK DET
IC404 IK DET
IK PROT
RV401 500
R434 100 :CHIP
D403 1SS237 PROT.
D406 1SS237 PROT.
Q407 2SA1406 IK DET
IC407 (1/2) NJM082BM BUFFER
IC407 (2/2) NJM082BM BUFFER
R453 56 :CHIP
D401,402 PROT.
D402 RB7.5M
D401 1SS123
R449 4.7M
CBG
(▨: MOUNTED CBG BOARD)

CBG BOARD



Schematic diagram

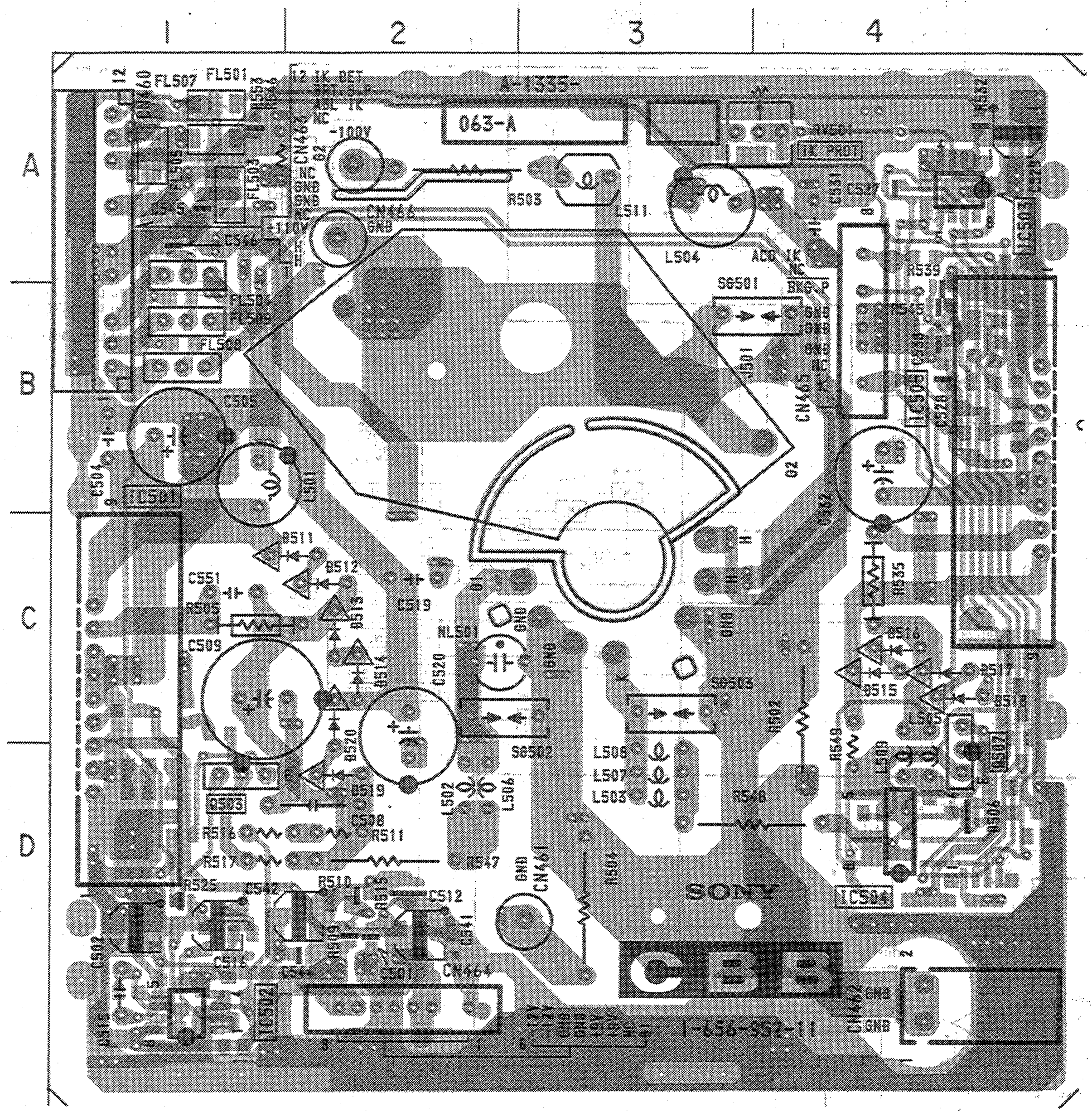
← CBG board

CBB [VIDEO OUT B]

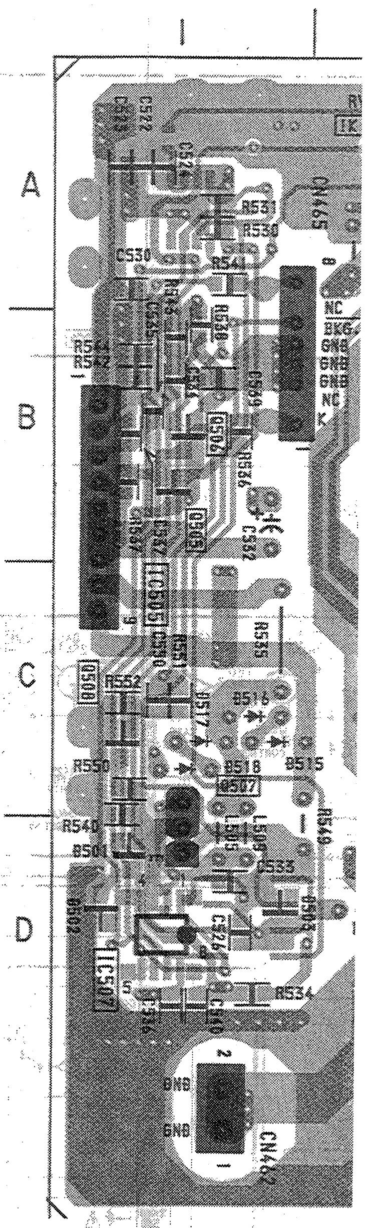
CBB BOARD (COMPONENT SIDE)

IC	
IC501	C-1
IC502	D-1
IC503	A-4
IC504	D-4
IC505	B-4
TRANSISTOR	
Q503	D-1
Q507	D-4
DIODE	
D506	D-4
D511	C-1
D512	C-2
D513	C-2
D514	C-2
D515	C-4
D516	C-4
D517	C-4
D518	C-4
D519	D-2
D520	C-2
VARIABLE RESISTOR	
RV501	A-4

– CBB BOARD – <Component Side>


1
2
3
4
A
B
C
D
A-1335-
063-A
IC501
IC502
IC503
IC504
IC505
Q503
Q507
RV501
IK PROT
CN460
CN461
CN462
CN463
CN464
CN465
CN466
FL501
FL503
FL504
FL505
FL506
FL507
FL508
FL509
NL501
S6501
S6502
S6503
L501
L502
L503
L504
L505
L506
L507
L508
L509
L511
-100V
+110V
SONY
CBB
1-656-952-11

<Conductor Side>

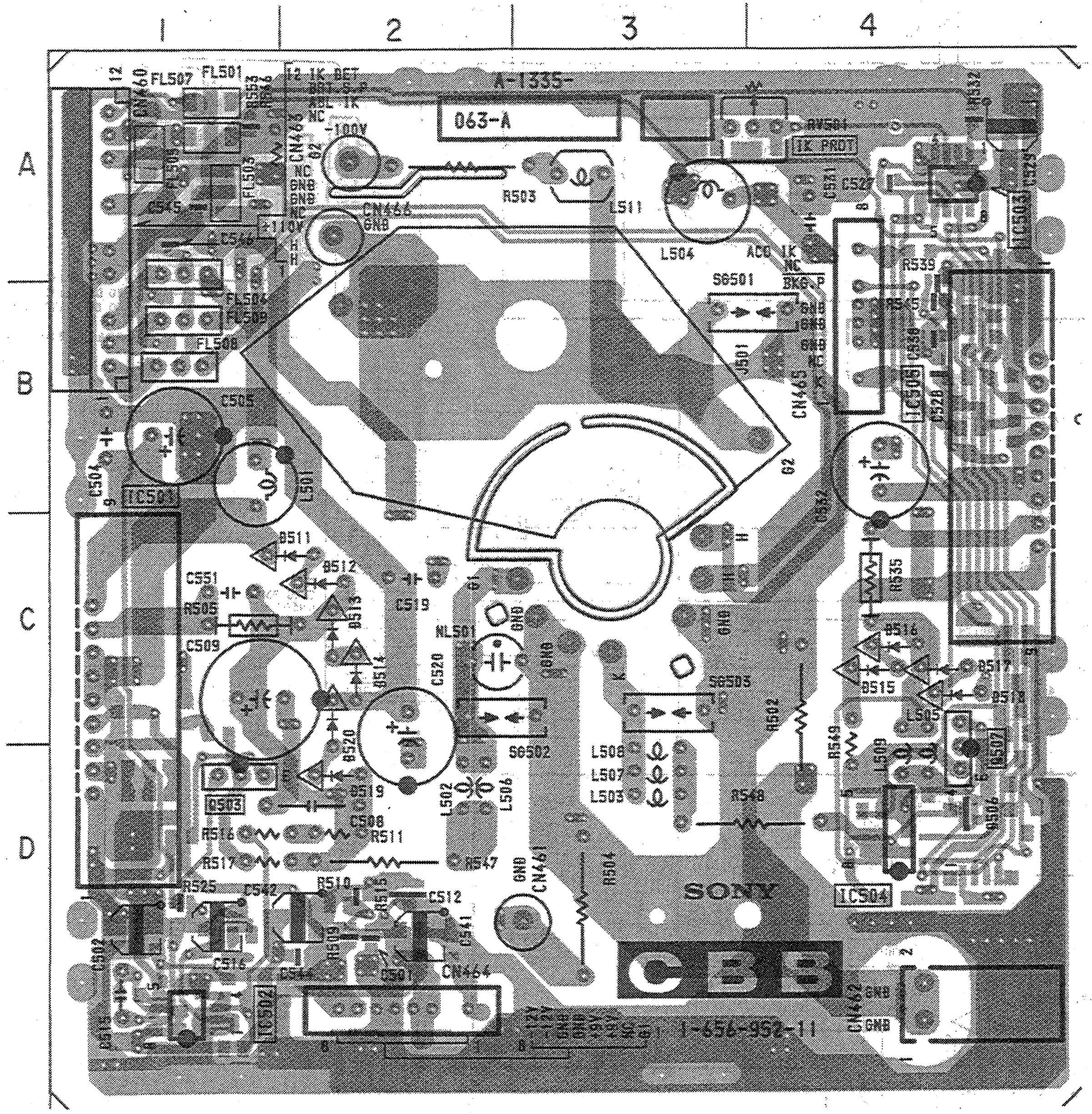

1
A
B
C
D
CN462

CBB [VIDEO OUT B]

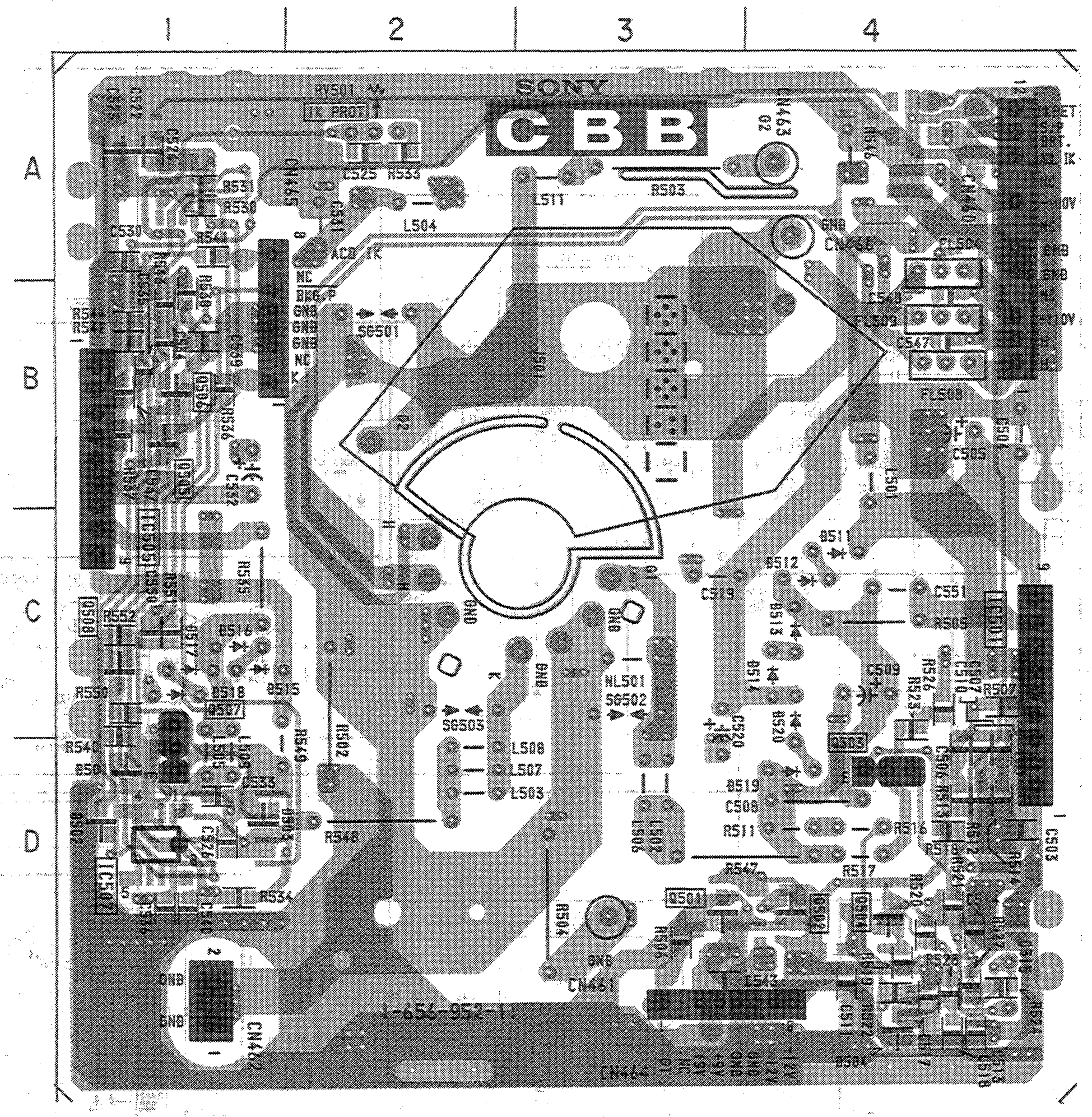
3B BOARD
OMPONENT SIDE)

IC	
IC501	C-1
IC502	D-1
IC503	A-4
IC504	D-4
IC505	B-4
RANSISTOR	
Q503	D-1
Q507	D-4
DIODE	
D506	D-4
D511	C-1
D512	C-2
D513	C-2
D514	C-2
D515	C-4
D516	C-4
D517	C-4
D518	C-4
D519	D-2
D520	C-2
VARIABLE RESISTOR	
RV501	A-4

– CBB BOARD – <Component Side>


1
2
3
4
A
B
C
D
A-1335-
063-A
RV501
IK PROT
SONY
CBB
1-656-952-11
CN461
CN462
CN464
CN465
CN466
IC501
IC502
IC503
IC504
IC505

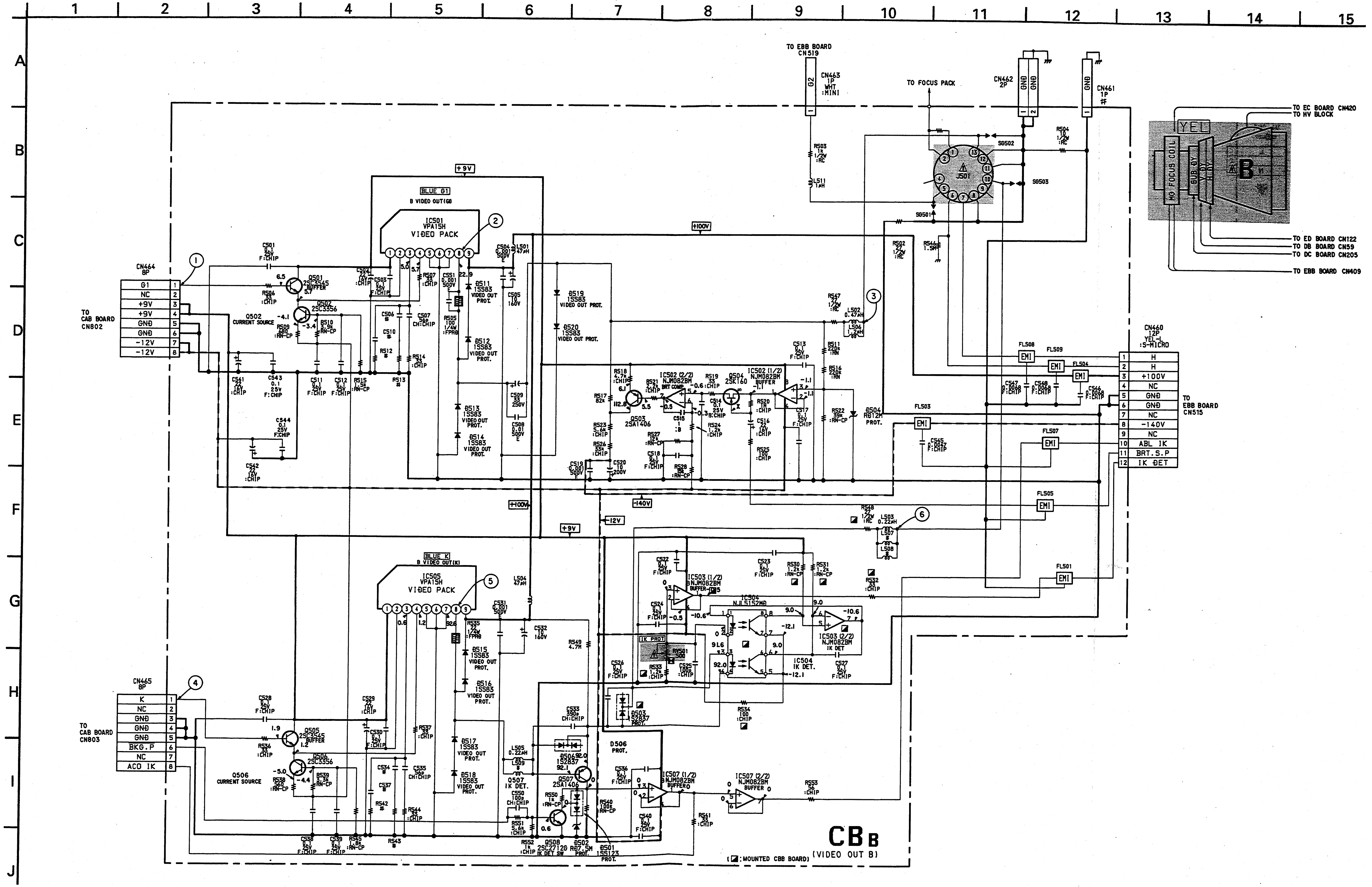
<Conductor Side>

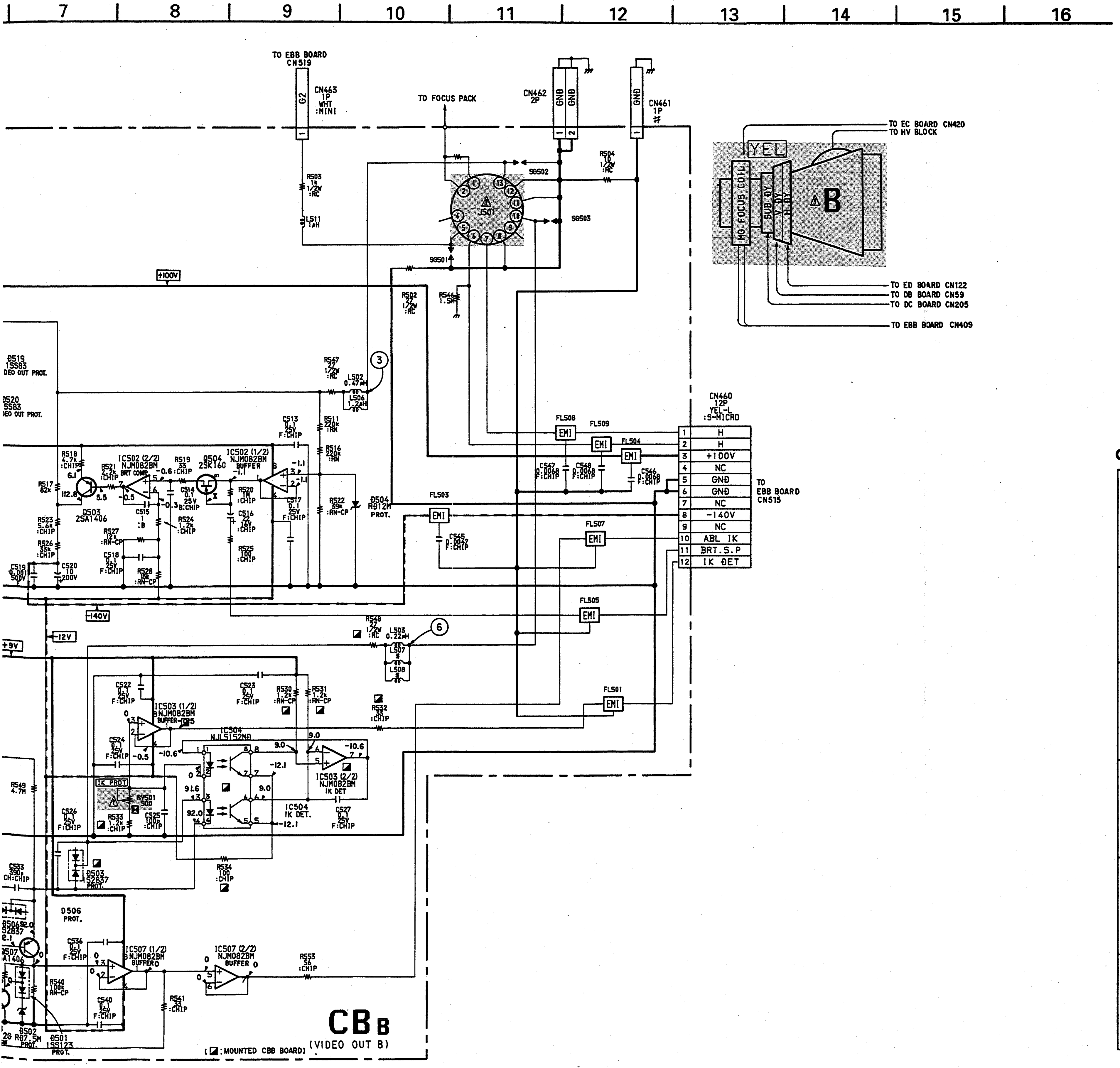

1
2
3
4
A
B
C
D
SONY
CBB
RV501
IK PROT
1-656-952-11
CN461
CN462
CN463
CN464
CN465
CN466

CBB BOARD
(CONDUCTOR SIDE)

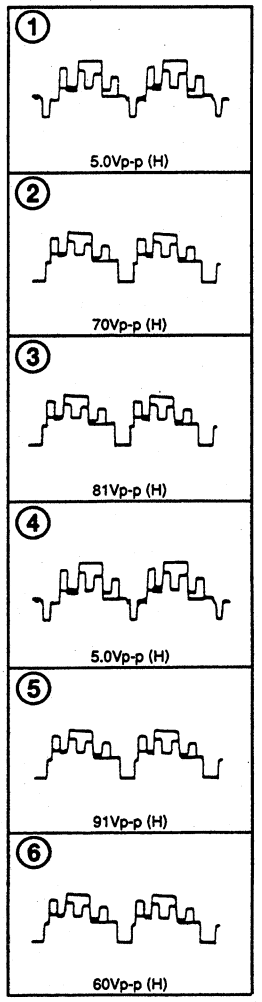
IC	
IC501	C-4
IC505	B-1
IC507	D-1
TRANSISTOR	
Q501	D-3
Q502	D-4
Q503	D-4
Q504	D-4
Q505	B-1
Q506	B-1
Q507	C-1
Q508	C-1
DIODE	
D501	D-1
D502	D-1
D503	D-1
D504	D-4
D511	C-4
D512	C-4
D513	C-4
D514	C-4
D515	C-1
D516	C-1
D517	C-1
D518	C-1
D519	D-4
D520	C-4
VARIABLE RESISTOR	
RV501	A-2

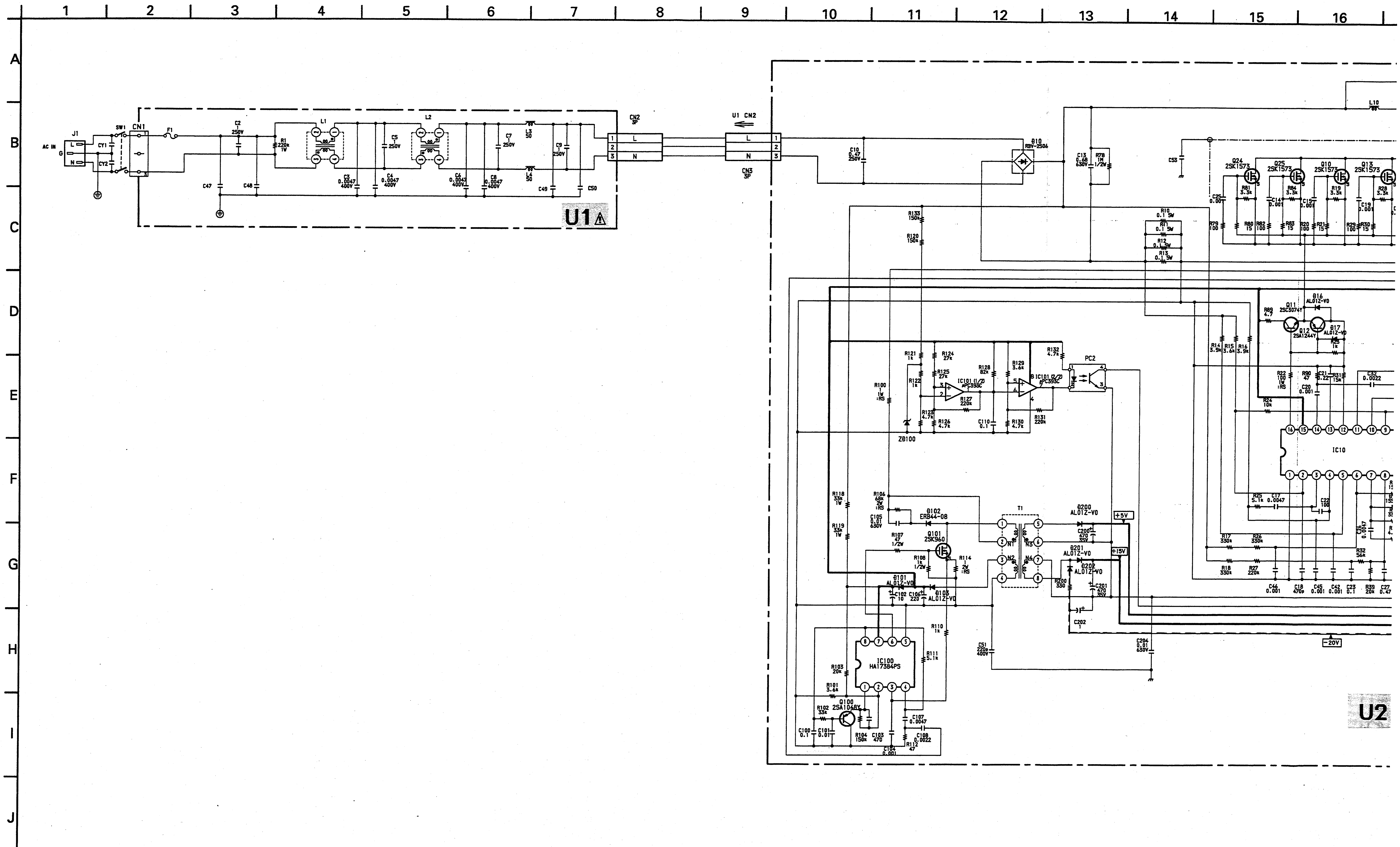
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

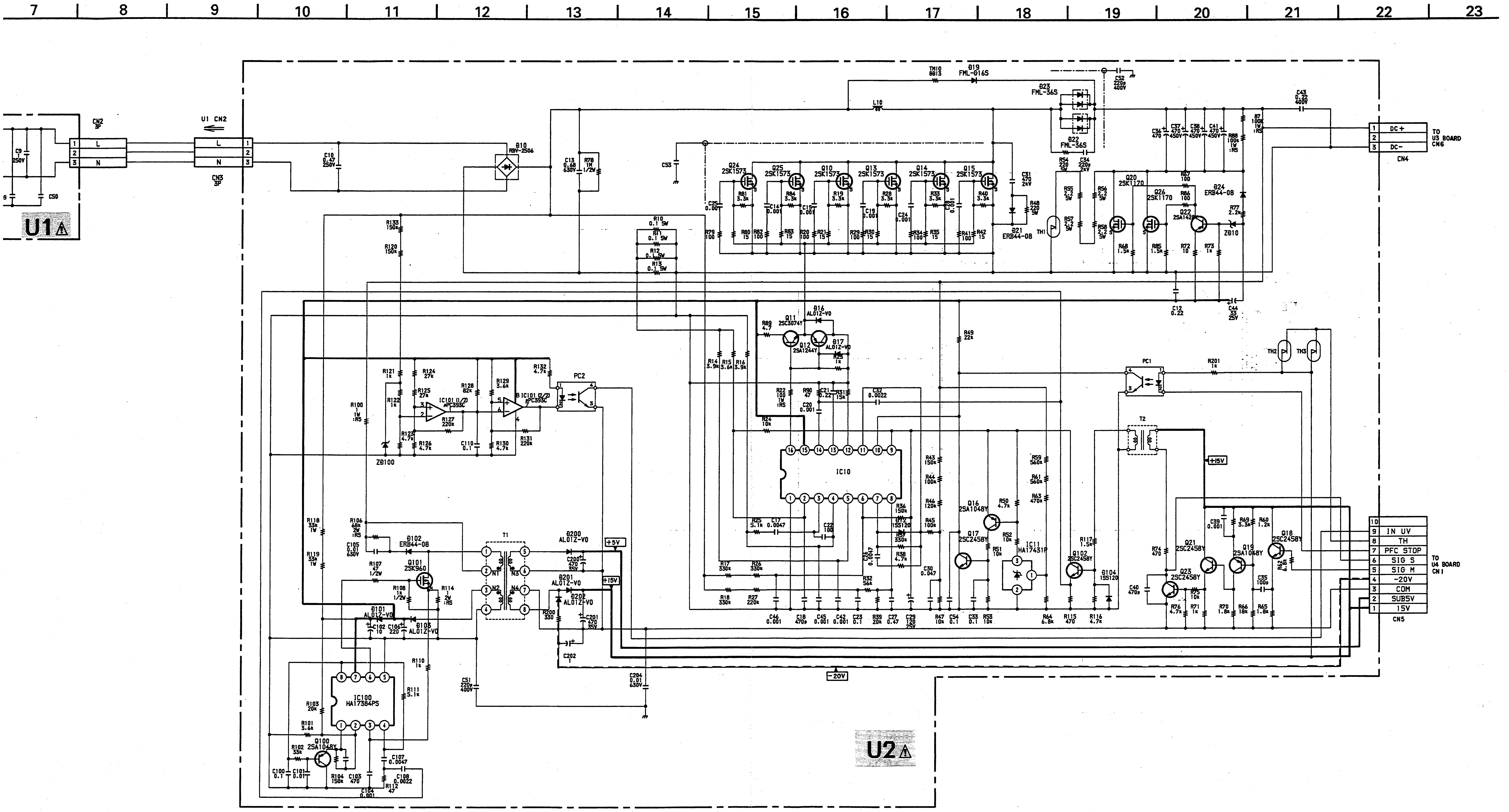

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
TO EBB BOARD CN519
CN463 1P WHT :MINI
G2
TO FOCUS PACK
CN462 2P
GND
CN461 1P
TO EC BOARD CN420
TO HV BLOCK
YEL
HO FOCUS COIL
SUB-DY
V-DY
H-DY
B
TO ED BOARD CN122
TO DB BOARD CN59
TO DC BOARD CN205
TO EBB BOARD CN409
J501
S0502
S0503
S0501
R503 1k 1/2W :RC
L511 1μH
R504 10 1/2W :RC
+9V
BLUE G1
B VIDEO OUT(G)
IC501 VPA15H VIDEO PACK
+100V
CN464 8P
G1
NC
+9V
+9V
GND
GND
-12V
-12V
TO CAB BOARD CN802
Q501 2SC3545 BUFFER
Q502 2SC3356
Q502 CURRENT SOURCE
D511 1SS83 VIDEO OUT PROT.
D512 1SS83 VIDEO OUT PROT.
D513 1SS83 VIDEO OUT PROT.
D514 1SS83 VIDEO OUT PROT.
D519 1SS83 VIDEO OUT PROT.
D520 1SS83 VIDEO OUT PROT.
IC502 (2/2) NJM082BM BRT COMP
Q504 2SK160
IC502 (1/2) NJM082BM BUFFER
Q503 2SA1406
D504 RD12M PROT.
L502 0.47μH
L506 1.2μH
CN460 12P YEL-L :S-MICRO
H
H
+100V
NC
GND
GND
NC
-140V
NC
ABL IK
BRT.S.P
IK DET
TO EBB BOARD CN515
FL508
FL509
FL504
FL503
FL507
FL505
FL501
EMI
-140V
+100V
-12V
+9V
L503 0.22μH
L507
L508
BLUE K
B VIDEO OUT(K)
IC505 VPA15H VIDEO PACK
L504 47μH
IC503 (1/2) NJM082BM BUFFER
IC504 NJL5152MA
IC503 (2/2) NJM082BM IK DET
IC504 IK DET.
IK PROT
RV501
CN465 8P
K
NC
GND
GND
GND
BKG.P
NC
ACO IK
TO CAB BOARD CN803
Q505 2SC3545 BUFFER
Q506 2SC3356
Q506 CURRENT SOURCE
D515 1SS83 VIDEO OUT PROT.
D516 1SS83 VIDEO OUT PROT.
D517 1SS83 VIDEO OUT PROT.
D518 1SS83 VIDEO OUT PROT.
D503 1SS123 PROT.
D506 PROT.
D505 1S2837
Q507 2SA1406 IK DET.
Q508 2SC2712G IK DET SW
D502 RD7.5M PROT.
D501 1SS123 PROT.
IC507 (1/2) NJM082BM BUFFER
IC507 (2/2) NJM082BM BUFFER
CBB
(VIDEO OUT B)
(◪:MOUNTED CBB BOARD)
① ② ③ ④ ⑤ ⑥


7
8
9
10
11
12
13
14
15
16
TO EBB BOARD CN519
CN463 1P WHT :MINI
G2
TO FOCUS PACK
CN462 2P
GND
GND
CN461 1P
GND
TO EC BOARD CN420
TO HV BLOCK
YEL
FOCUS COIL
MG
SUB DY
V DY
H DY
B
TO ED BOARD CN122
TO DB BOARD CN59
TO DC BOARD CN205
TO EBB BOARD CN409
J501
S0502
S0503
S0501
R503
L511
R504
R502
R546
+100V
R547
L502
L506
R511
R516
D519 1SS83 DED OUT PROT.
D520 SS83 DED OUT PROT.
IC502 (2/2) NJM082BM BRT COMP
IC502 (1/2) NJM082BM BUFFER
Q504 2SK160
Q503 2SA1406
R519
R522
D504 RD12M PROT.
FL508
FL509
FL504
FL503
FL507
FL505
FL501
EMI
CN460 12P YEL-L :S-MICRO
1 H
2 H
3 +100V
4 NC
5 GND
6 GND
7 NC
8 -140V
9 NC
10 ABL IK
11 BRT.S.P
12 IK DET
TO EBB BOARD CN515
-140V
-12V
+9V
R548
L503
L507
L508
IC503 (1/2) NJM082BM BUFFER
IC504 NJL5152MA
IC503 (2/2) NJM082BM IK DET
IC504 IK DET.
IK PROT
RV501
R549
D503 S2837 PROT.
R534
D506 PROT.
IC507 (1/2) NJM082BM BUFFER
IC507 (2/2) NJM082BM BUFFER
R553
R541
R540
D501 1SS123 PROT.
D502
CBB
(VIDEO OUT B)
(◪ : MOUNTED CBB BOARD)

CBB BOARD


①
5.0Vp-p (H)
②
70Vp-p (H)
③
81Vp-p (H)
④
5.0Vp-p (H)
⑤
91Vp-p (H)
⑥
60Vp-p (H)

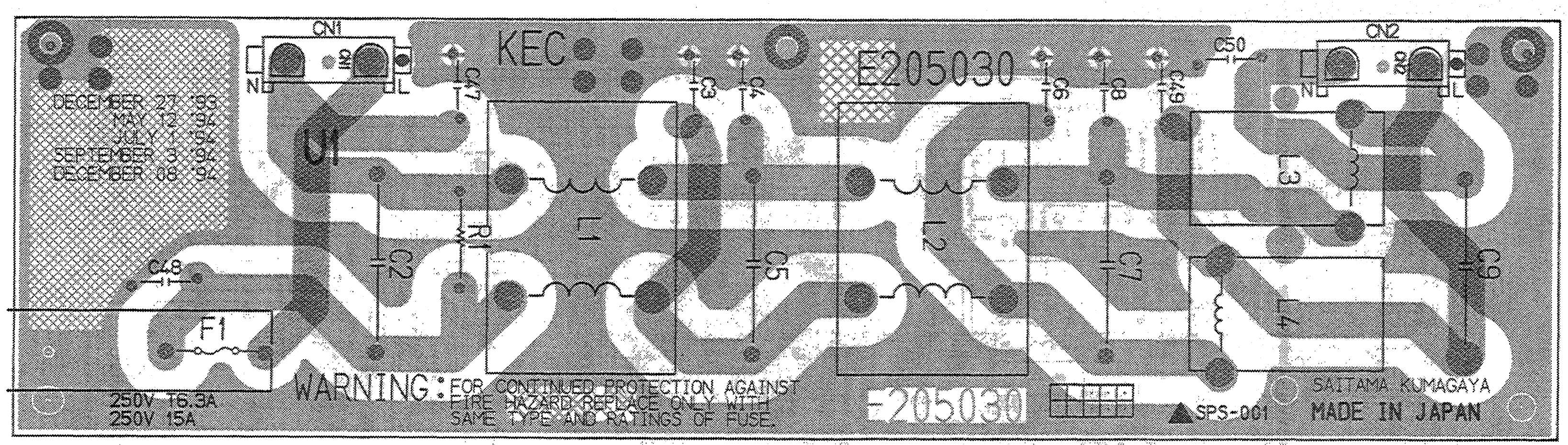

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J
J1
AC IN
L
G
N
SW1
CN1
CY1
CY2
F1
C2 250V
R1 220k 1W
L1
L2
C3 0.0047 400V
C4 0.0047 400V
C5 250V
C6 0.0047 400V
C8 0.0047 400V
C7 250V
L3 50
L4 50
C9 250V
C47
C48
C49
C50
U1
CN2 3P
U1 CN2
CN3 3P
C10 0.47 250V
D10 RBV-2506
C13 0.68 630V
R78 1M 1/2W
C53
Q24 2SK1573
Q25 2SK1573
Q10 2SK1573
Q13 2SK1573
R81 3.3k
R84 3.3k
R19 3.3k
R28 3.3k
C25 0.001
C14 0.001
C15 0.001
C19 0.001
R79 100
R80 15
R82 100
R83 15
R20 100
R21 15
R29 100
R30 15
R10 0.1 5W
R11 0.1 5W
R12 0.1 5W
R13 0.1 5W
L10
R133 150k
R120 150k
D16 AL01Z-V0
Q11 2SC3074Y
Q12 2SA1244Y
D17 AL01Z-V0
R89 4.7
R25 1k
R14 3.9k
R15 3.6k
R16 3.9k
R121 1k
R124 27k
R125 27k
R122 1k
R128 82k
R129 3.6k
R132 4.7k
PC2
IC101 (1/2) µPC393C
IC101 (2/2) µPC393C
R127 220k
R123 4.7k
R126 4.7k
C110 0.1
R130 4.7k
R131 220k
R100 1W :RS
ZD100
R22 100 1W :RS
R90 47
C21 0.22
R31 15k
C32 0.0022
C20 0.001
R24 10k
IC10
R118 33k 1W
R119 33k 1W
R106 68k 2W :RS
C105 0.01 630V
D102 ERB44-08
T1
D200 AL01Z-V0
+5V
C200 470 35V
R107 47 1/2W
Q101 2SK960
D201 AL01Z-V0
+15V
D202 AL01Z-V0
R108 1k 1/2W
R114 1 2W :RS
N1
N2
N3
N4
R200 330
C201 470 35V
D101 AL01Z-V0
C102 10
C106 220
D103 AL01Z-V0
C202 1
C204 0.01 630V
-20V
R25 5.1k
C17 0.0047
C22 100
R17 330k
R26 330k
R32 56k
R18 330k
R27 220k
C46 0.001
C18 470p
C45 0.001
C42 0.001
C23 0.1
R39 20k
C27 0.47
R110 1k
C51 220p 400V
R111 5.1k
IC100 HA17384PS
R103 20k
R101 3.6k
Q100 2SA1048Y
R102 33k
C107 0.0047
C100 0.1
C101 0.01
R104 150k
C103 470
C104 0.001
C108 0.0022
R112 47
U2


7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
U1
U2
CN2 3P
U1 CN2
CN3 3P
L
N
C9 250V
C50
C10 0.47 250V
D10 RBV-2506
C13 0.68 630V
R78 1M 1/2W
C53
L10
TH10 8013
D19 FML-G16S
D23 FML-36S
D22 FML-36S
C52 220p 400V
C43 0.22 400V
Q24 2SK1573
Q25 2SK1573
Q10 2SK1573
Q13 2SK1573
Q14 2SK1573
Q15 2SK1573
C31 470 2kV
R48 220 5W
D21 ERB44-08
TH1
R54 220 5W
C34 220p 2kV
R55 2.2 5W
R56 2.2 5W
R57 2.2 5W
R58 2.2 5W
Q20 2SK1170
Q26 2SK1170
Q22 2SA1428
D24 ERB44-08
R77 2.2k
ZD10
C36 470
C37 470 450V
C38 470 450V
C41 470 450V
R88 100k 1W :RS
R87 100k 1W :RS
C12 0.22
C44 33 25V
TO U3 BOARD CN6
DC+
DC-
CN4
R10 0.1 5W
R11 0.1 5W
R12 0.1 5W
R13 0.1 5W
R133 150k
R120 150k
D16 AL01Z-V0
D17 AL01Z-V0
Q11 2SC3074Y
Q12 2SA1244Y
R89 4.7
R14 3.9k
R15 3.6k
R16 3.9k
R22 100 1W :RS
C20 0.001
C21 0.22
R31 15k
C32 0.0022
R24 10k
IC10
R49 22k
PC1
R201 1k
TH2
TH3
T2
+15V
PC2
R121 1k
R124 27k
R125 27k
R122 1k
IC101 (1/2) µPC393C
IC101 (2/2) µPC393C
R127 220k
R128 82k
R129 3.6k
R132 4.7k
R100 1W :RS
R123 4.7k
R126 4.7k
C110 0.1
R130 4.7k
R131 220k
ZD100
R118 33k 1W
R119 33k 1W
R106 68k 2W :RS
C105 0.01 630V
D102 ERB44-08
R107 47 1/2W
Q101 2SK960
R108 1k 1/2W
R114 1 2W :RS
T1
N1
N2
N3
N4
D200 AL01Z-V0
C200 470 35V
D201 AL01Z-V0
D202 AL01Z-V0
C201 470 35V
R200 330
C202
+5V
+15V
D101 AL01Z-V0
C102 10
C106 220
D103 AL01Z-V0
R110 1k
R111 5.1k
IC100 HA17384PS
R103 20k
R101 3.6k
R102 33k
Q100 2SA1048Y
C100 0.1
C101 0.01
R104 150k
C103 470
C104 0.001
R112 47
C107 0.0047
C108 0.0022
C51 220p 400V
C204 0.01 630V
-20V
R17 330k
R26 330k
R18 330k
R27 220k
R25 5.1k
C17 0.0047
C22 100
C26 0.0047
R36 150k
D11 1SS120
R37 330k
R38 4.7k
R32 56k
C30 0.047
R43 150k
R44 100k
R46 120k
R45 100k
R59 560k
R61 560k
R63 470k
Q16 2SA1048Y
R50 4.7k
Q17 2SC2458Y
R52 10k
R51 10k
IC11 HA17431P
R117 1.5k
Q102 2SC2458Y
D104 1SS120
C46 0.001
C18 470p
C45 0.001
C42 0.001
C23 0.1
R39 20k
C27 0.47
C29 120 25V
R47 10k
C54 0.1
C33 0.1
R53 10k
R64 6.8k
R115 470
R116 4.7k
C39 0.001
R69 3.3k
R60 1.2k
Q18 2SC2458Y
R74 470
Q21 2SC2458Y
Q19 2SA1048Y
R62 4.7k
Q23 2SC2458Y
C35 100p
C40 470p
R75 10k
R76 4.7k
R71 1k
R70 1.8k
R66 18k
R65 1.8k
IN UV
TH
PFC STOP
SIG S
SIG M
-20V
COM
SUB5V
15V
CN5
TO U4 BOARD CN1

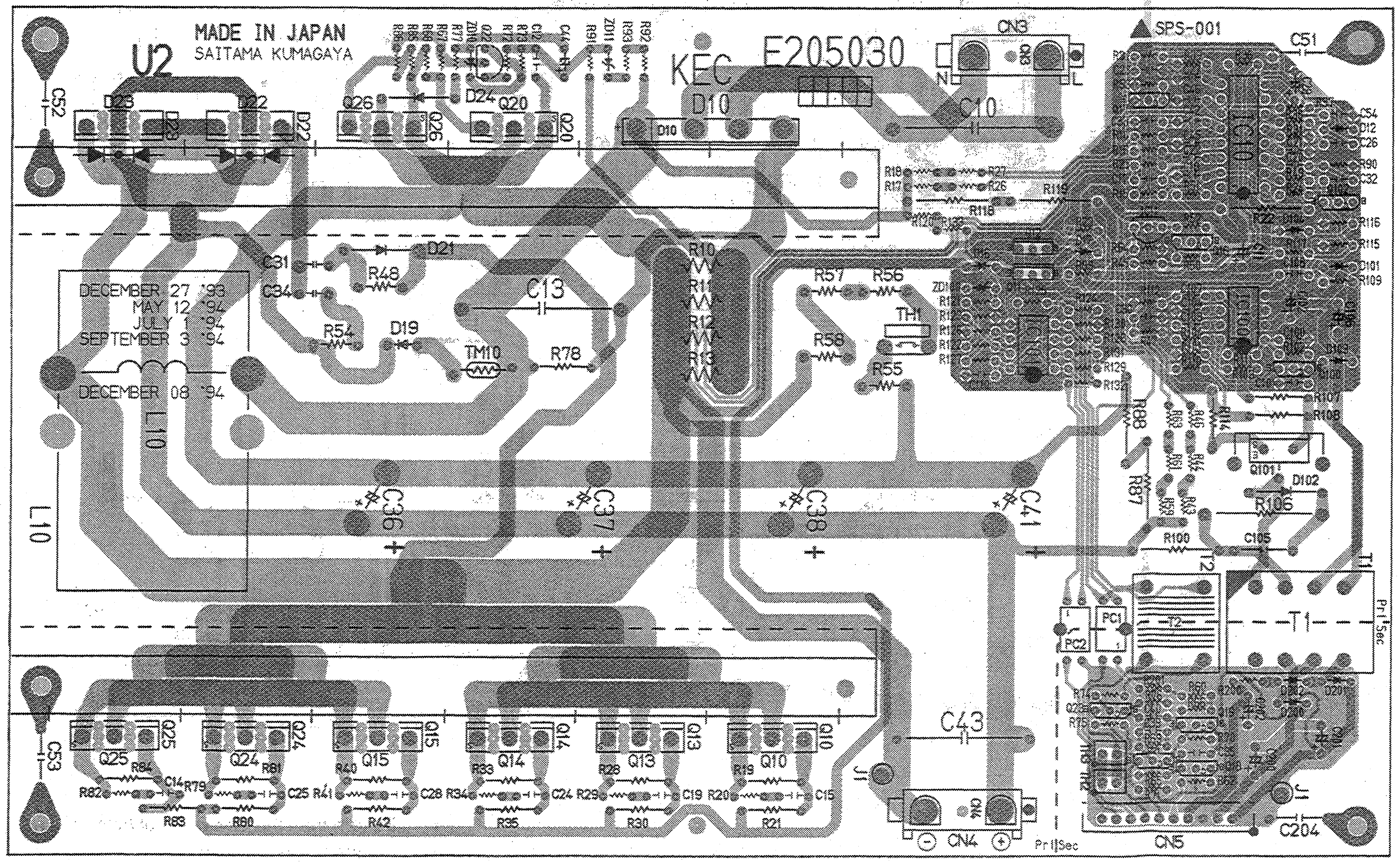
U1 [SWITCHING REGULATOR]

U2 [SWITCHING REGULATOR]

– U1 BOARD –


CN1
KEC
E205030
C50
CN2
N
L
C47
C3
C4
C6
C8
C49
DECEMBER 27 '93
MAY 12 '94
JULY 1 '94
SEPTEMBER 3 '94
DECEMBER 08 '94
U1
R1
L1
L2
L3
L4
C2
C5
C7
C9
C48
F1
250V T6.3A
250V 15A
WARNING: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD REPLACE ONLY WITH SAME TYPE AND RATINGS OF FUSE.
E205030
SPS-001
SAITAMA KUMAGAYA
MADE IN JAPAN

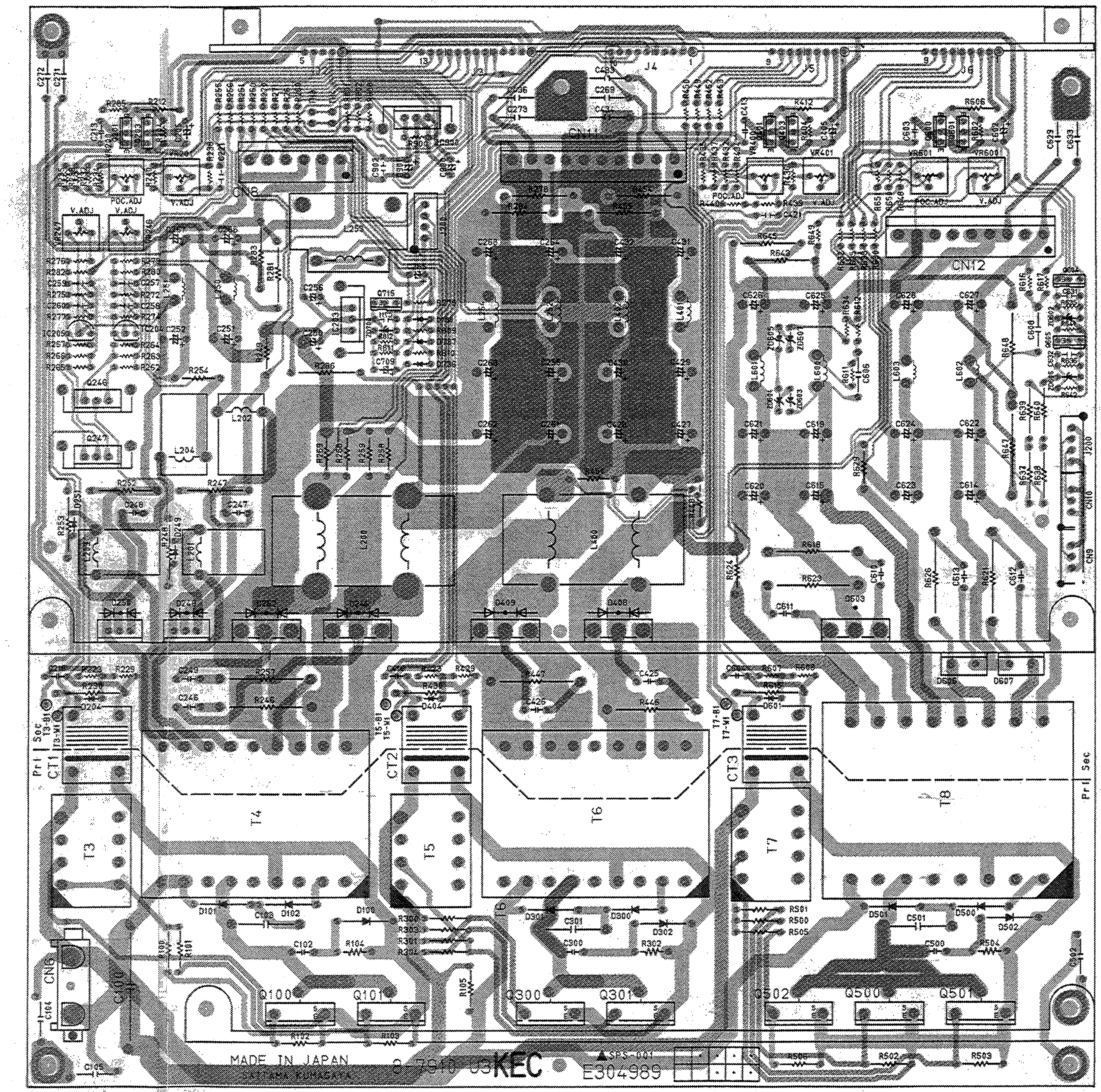
– U2 BOARD –


MADE IN JAPAN
SAITAMA KUMAGAYA
U2
C52
D23
D22
Q26
D24
Q20
KEC
E205030
D10
CN3
SPS-001
C51
C10
IC10
R18
R17
R27
R26
R118
R119
D21
C31
R48
C34
C13
R10
R11
R12
R13
R57
R56
TH1
R58
R55
R54
D19
TM10
R78
DECEMBER 27 '93
MAY 12 '94
JULY 1 '94
SEPTEMBER 3 '94
DECEMBER 08 '94
L10
C36
C37
C38
C41
R88
R87
Q101
D102
R106
R100
C105
T2
T1
PC1
PC2
Pri Sec
C43
J1
CN4
Q25
Q24
Q15
Q14
Q13
Q10
R84
R81
R40
R33
R28
R19
R82
C14
R79
C25
R41
C28
R34
C24
R29
C19
R20
C15
R83
R80
R42
R35
R30
R21
CN5
C204
C53

- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

U3 [SWITCHING REGULATOR]

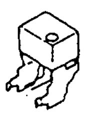
– U3 BOARD –


CN12
CN11
CN6
T3
T4
T5
T6
T7
T8
CT1
CT2
CT3
Pri Sec
L200
L400
Q100
Q101
Q300
Q301
Q502
Q500
Q501
FOC.ADJ
V.ADJ
MADE IN JAPAN
SAITAMA KUMAGAYA
KEC
E304989

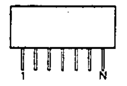
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

6-5. SEMICONDUCTORS

BX1398

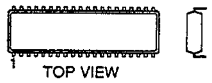


BX-6473
BX-6474
BX-6574
BX-6589
BX7913A
MC-8638
MC-8639
VPA15H



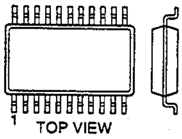
MARKING SIDE VIEW

CXA1216P
CXA1470AS
MBM27C512-20
TDA4555/V1



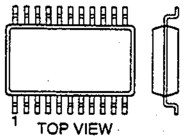
TOP VIEW
28PIN

CXA1726AM



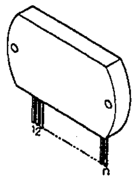
TOP VIEW
8PIN

CXK3864-040M
CXK3864-041M
CXK3864-042M
CXK5863BM-35
CXK5864CM-10LL

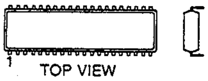


TOP VIEW
28PIN

CX23065A
LA7016

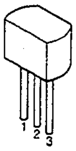


CX7916
LM393P
LM6364N
TL082ACP
TL082CP
µPC393C
µPC4558C
µPC814C

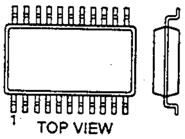


TOP VIEW
8PIN

CX-894

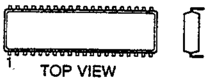


HD14053BFP
HD14538BFP
MC14053BF
MC14582BF
MC74HC157AF
MC74HC4053F
MC74HC4538AF
SN74HC157ANS
SN74HC163ANS
TC74HC123AF
TC74HC139AF
TC74HC163AF
TC74HC165AF
µPD74HC238GS-E2



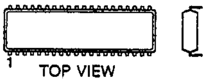
TOP VIEW
16PIN

HD14538BP
HD74HC123AP
MB675429
MC10124L
MC14040BCP
MC14495P1
MC14572UBCP
MC34051P
MC74HC4053N
SN74S124N
TC4040BP



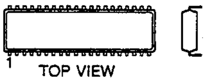
TOP VIEW
16PIN

HD64180R1P8



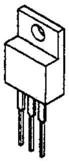
TOP VIEW
64PIN

HD74HC00FPEL
MP7670AS
SN74HC00ANS

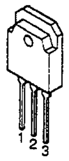


TOP VIEW
24PIN

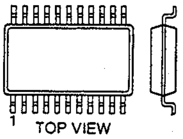
LM2940CT-5.0
LM7812CT
NJM7812FA
TA7812S
RC7808FA
NJM7808FA
NJM7809FA
NJM78M09FA



LM2990T-5.0

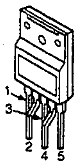


LM6364MX
LM6361M
NJM082BH
NJM2228M
NJM5152MD
µPC393G2
µPC4558G2
µPC814G2-1

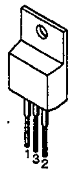


TOP VIEW
8PIN

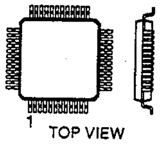
LM675T



LM7912CT
NJM7908FA
NJM7912FA
RC7908FA

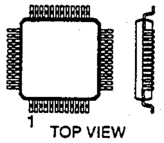


MBCG24123-4188



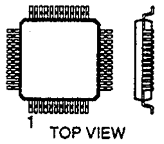
TOP VIEW
120PIN

MB654842UPF
MB671469PF



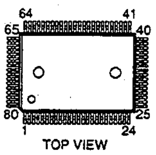
TOP VIEW
64PIN

MB670840PF



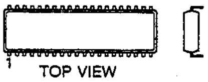
TOP VIEW
100PIN

MB8855-1314N



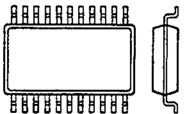
TOP VIEW

MC14001BCP
MC14011BCP
MC1495L
MC74HC00AN
MC74HC132N
TC74HC107AP
µPC1394C
µPC319C



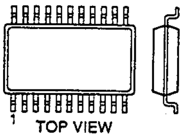
TOP VIEW
14PIN

MC14013BF
MC14081BF
MC74HC00AF
MC74HC126AF
MC74HC14AF
SN74HC04ANS
SN74HC08ANS
SN74HC126ANS
SN74HC32ANS
SN74HC74ANS
SN74HC86ANS
SN74LS12NS
TC74HC86AF
TC74VHC00F
TC74VHC08F



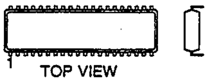
TOP VIEW
14PIN

MC74HC244AN
SN74HC244ANS
TC74HC541AP



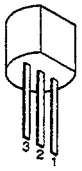
TOP VIEW
20PIN

MC74HC541F
SN74HC374ANS

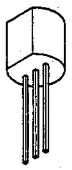


TOP VIEW
20PIN

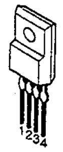
NJM78L05A



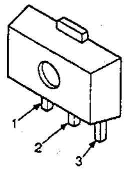
NJM78L12A
NJM79L12A



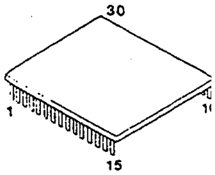
PQ05RF1



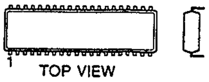
RH5VA43AA
RH5VA43CA
S-80743AL



SBX1765-01

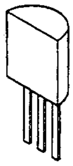


TDA4565

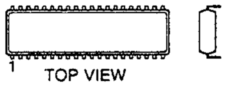


TOP VIEW
18PIN

TL431CLP

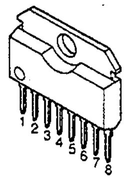


μPC1377C

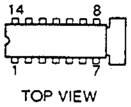


22PIN

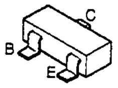
μPC1498H



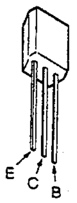
μPD28C64ACZ-20


14
8
1
7
TOP VIEW

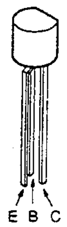
DTA144EK
DTC144EK
2SA1162-G
2SA1162-YG
2SA1462-Y33
2SA812
2SC1623-L5L6
2SC2712-YG
2SC3356
2SC3545



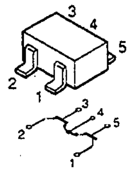
DTC144ES
XDC114ES



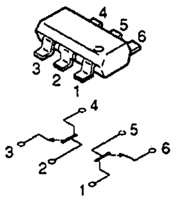
FMS1



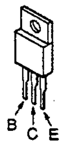
FMW2
FMW5
FMW-8


3
4
5
2
1
3
4
2
5
1

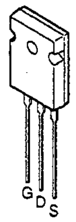
IMT1US
IMX2


4
5
6
3
2
1
4
5
3
2
6
1

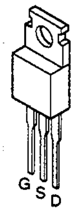
IRFIP250
2SB1099L
2SC4630LS
2SD1459
2SD982



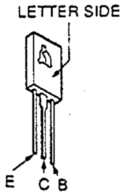
IRFP350LF20



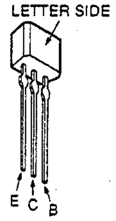
IRF1BC30



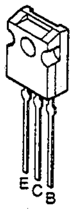
2SA1142-P
2SA1381-E
2SA1406-E
2SA1407-D
2SC2688-LK
2SC3503-E
2SC3955-E


LETTER SIDE
E
C
B

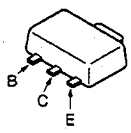
2SA1175
2SA1175-HFE
2SC2785
2SC2785-HFE


LETTER SIDE
E
C
B

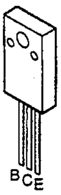
2SA1358-Y
2SC3421-Y



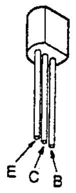
2SA1463IK
2SC2954
2SC3357
2SD999



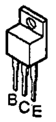
2SA1540
2SB897
2SC4054N
2SD1210



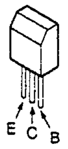
2SB1037-R
2SD789-34
2SD789-4



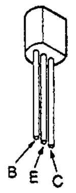
2SB1315



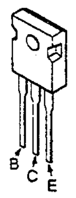
2SB734-34
2SD774-34



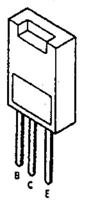
2SC2471



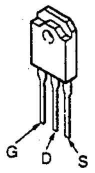
2SC3998CA



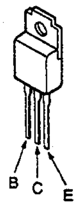
2SC5238



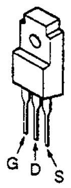
2SD1403-CA



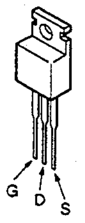
2SD1590-L



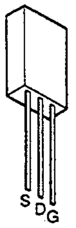
2SD1977
2SK817



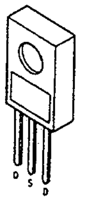
2SJ142
2SJ143
2SK755
2SK929



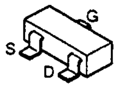
2SJ223L



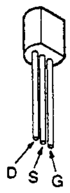
2SK1270



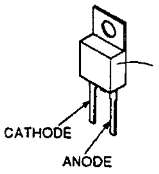
2SK160-K5
2SK160-K6



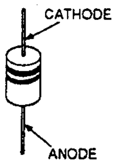
2SK523-M1



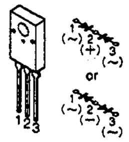
DD82RC


CATHODE
ANODE

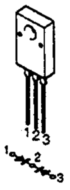
DFC15TR


CATHODE
ANODE

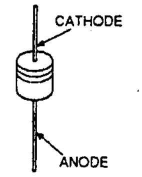
D10SC6MR



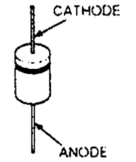
D10SC9H



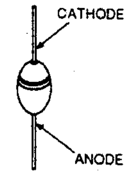
EGP10D
EGP10G
ERA22-06
RD10ES-B2
RD13ES-B2
RD15ES-B2
RD20ES-B2
RD27ES-B2
RD33ES-B2
RD3.3ES-B2
RD39ES-B2
RD4.7ES-B2
RD5.1ES-B2
1SS119


CATHODE
ANODE

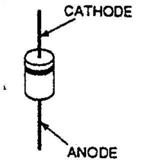
ERA22-08
RD3.9ES-B2
1SS83


CATHODE
ANODE

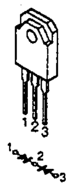
ERC06-15SA
ERC38-06
V06C
V09G
V11N
V19EF1


CATHODE
ANODE

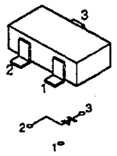
ERC91-02
RU-1
RU-1C


CATHODE
ANODE

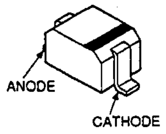
ESAD39M-06C



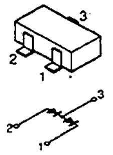
RD12M-B2
RD13M-B2
RD15M-B2
RD2.4M-B
RD2.7M-B2
RD3.3M-B2
RD4.3M-B1
RD5.1M-B2
RD6.2M-B1
RD6.8M-B2
RD7.5M-B2
UZM4.7X
1SS184



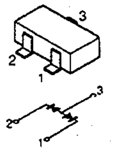
RD5.1SB-T2


ANODE
CATHODE

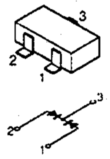
1SS123
1SS226



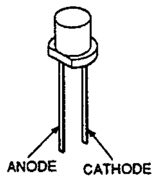
1S2835
1S2836



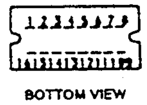
1S2837



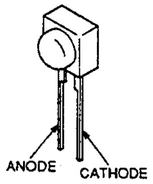
GL3HD43


ANODE
CATHODE

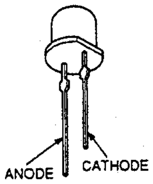
GL-6R202


BOTTOM VIEW

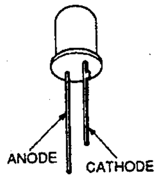
LN25RP
TLR224


ANODE
CATHODE

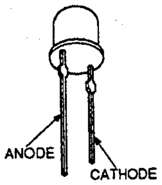
PY5504S-1


ANODE
CATHODE

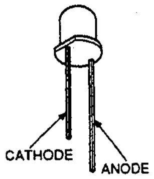
SLR-54VC12


ANODE
CATHODE

TLG113A


ANODE
CATHODE

TLR113A


CATHODE
ANODE

SECTION 7
EXPLODED VIEWS

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

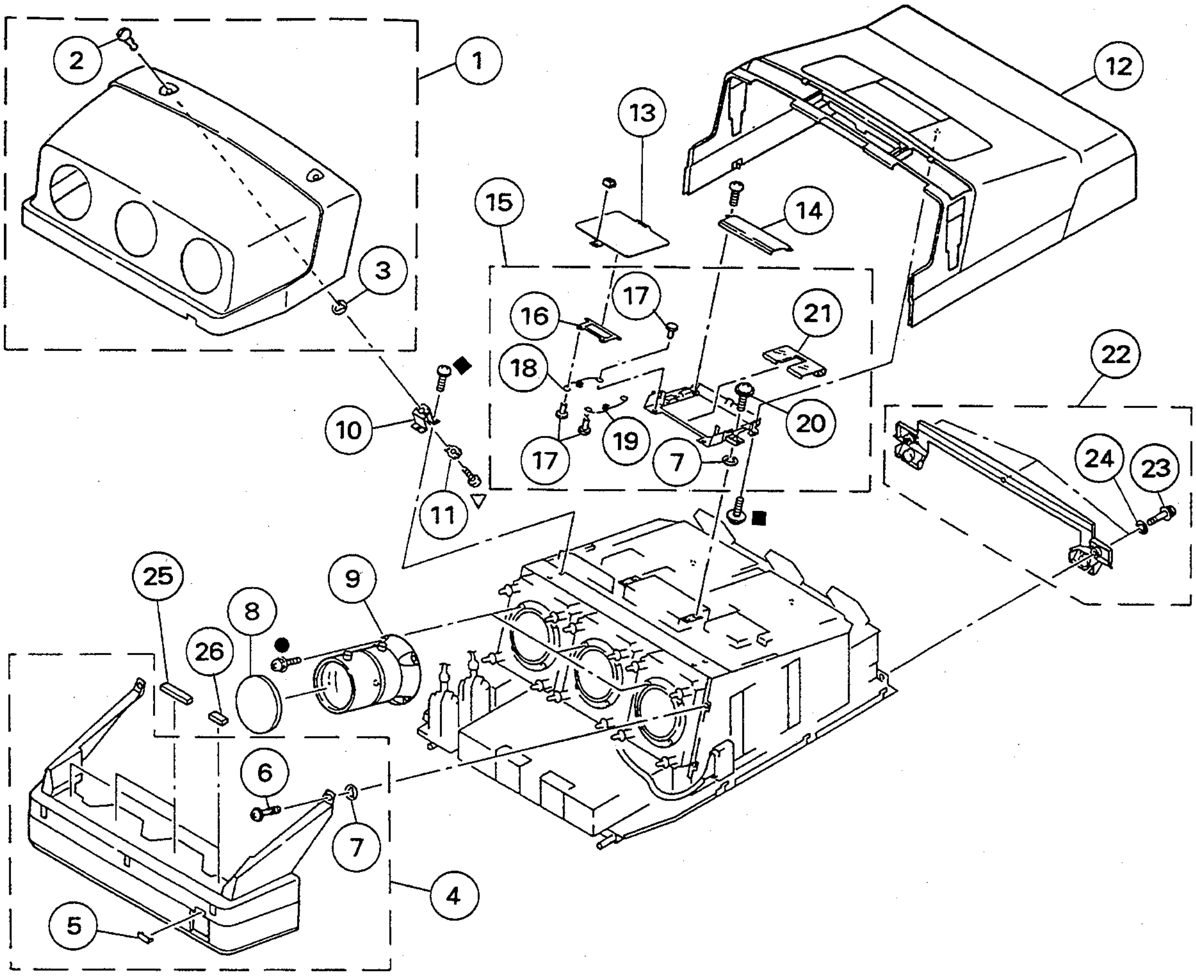
Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine servise.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

7-1. COVER

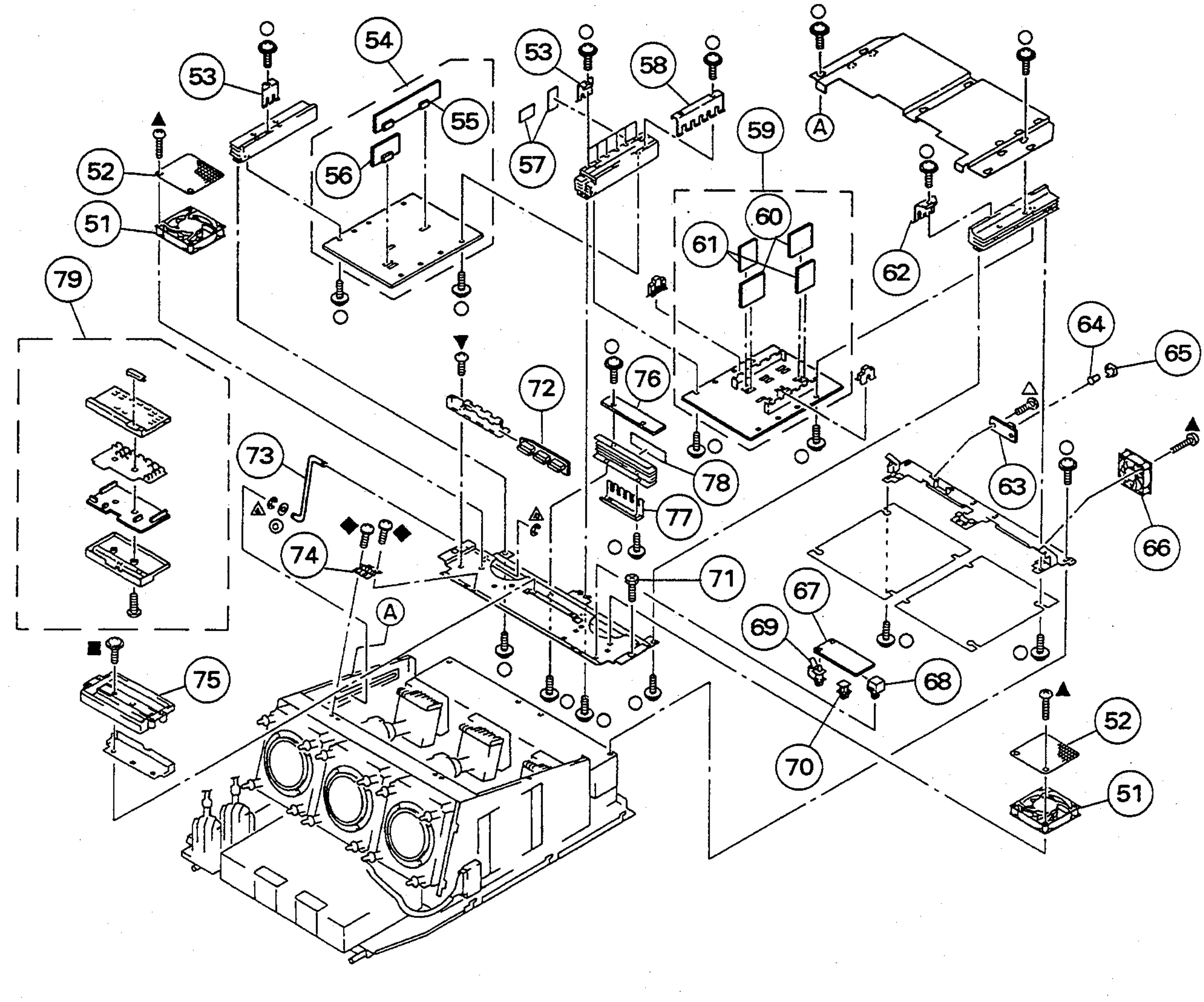
● : 7-682-665-09 +PSW 4X16
◆ : 7-682-647-09 +PS 3X6
■ : 7-685-663-79 SCREW (DIA. 4X16), TAPPING
▽ : 7-627-554-38 +P 2X1.8



REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4032-914-1	COVER ASSY, FRONT	2,3
2	4-049-769-01	FASTENER	
3	4-049-792-01	WASHER	
4	X-4032-915-1	PANEL ASSY, FRONT	5-7
5	4-395-534-02	FILTER	
6	4-047-260-01	SCREW (B)(4X15)	
7	4-033-712-01	WASHER	
8	4-050-318-01	CAP, LENS	
9	4-049-735-01	LENS (HD-10)	
10	*4-049-778-01	HOLDER, COVER	
11	*4-049-776-01	SPRING	
12	X-4032-916-1	HOOD ASSY	
13	4-049-797-01	DOOR, CONTROL PANEL (VPH-1292Q)	
	4-049-797-11	DOOR, CONTROL PANEL (VPH-1292QM)	
	4-049-797-31	DOOR, CONTROL PANEL (VPH-1292QMG)	
14	4-049-765-01	COVER, SWITCH	
15	X-4032-925-1	GUIDE ASSY	7,16-21
16	*4-049-761-01	LEVER	
17	*4-049-781-01	BUSHING	
18	*4-049-775-01	SPRING (R)	
19	*4-049-774-01	SPRING (L)	
20	4-033-713-01	SCREW (+PWH M4X10), PREVENTION	
21	*4-049-802-01	PLATE, SLIDE	
22	X-4032-924-1	COVER ASSY, REAR	22,24
23	*4-049-768-01	SCREW (M3X14)	
24	*4-049-793-01	WASHER (3)	
25	4-050-539-11	CUSHION (F)	
26	4-050-539-01	CUSHION (F)	

7-2. ED BLOCK

▲ : 7-685-666-79 +BVTP 4X30
▼ : 7-685-660-79 +BVTP 4X10
◆ : 7-682-647-09 +PS 3X6
■ : 7-685-663-79 SCREW (DIA. 4X16), TAPPING
○ : 7-682-549-04 SCREW, TERMINAL (M 3X10)
△ : 7-685-646-79 +BVTP 3X8
◎ : 7-623-926-11 W 5.0, NYLON
◬ : 7-624-108-04 E 4.0



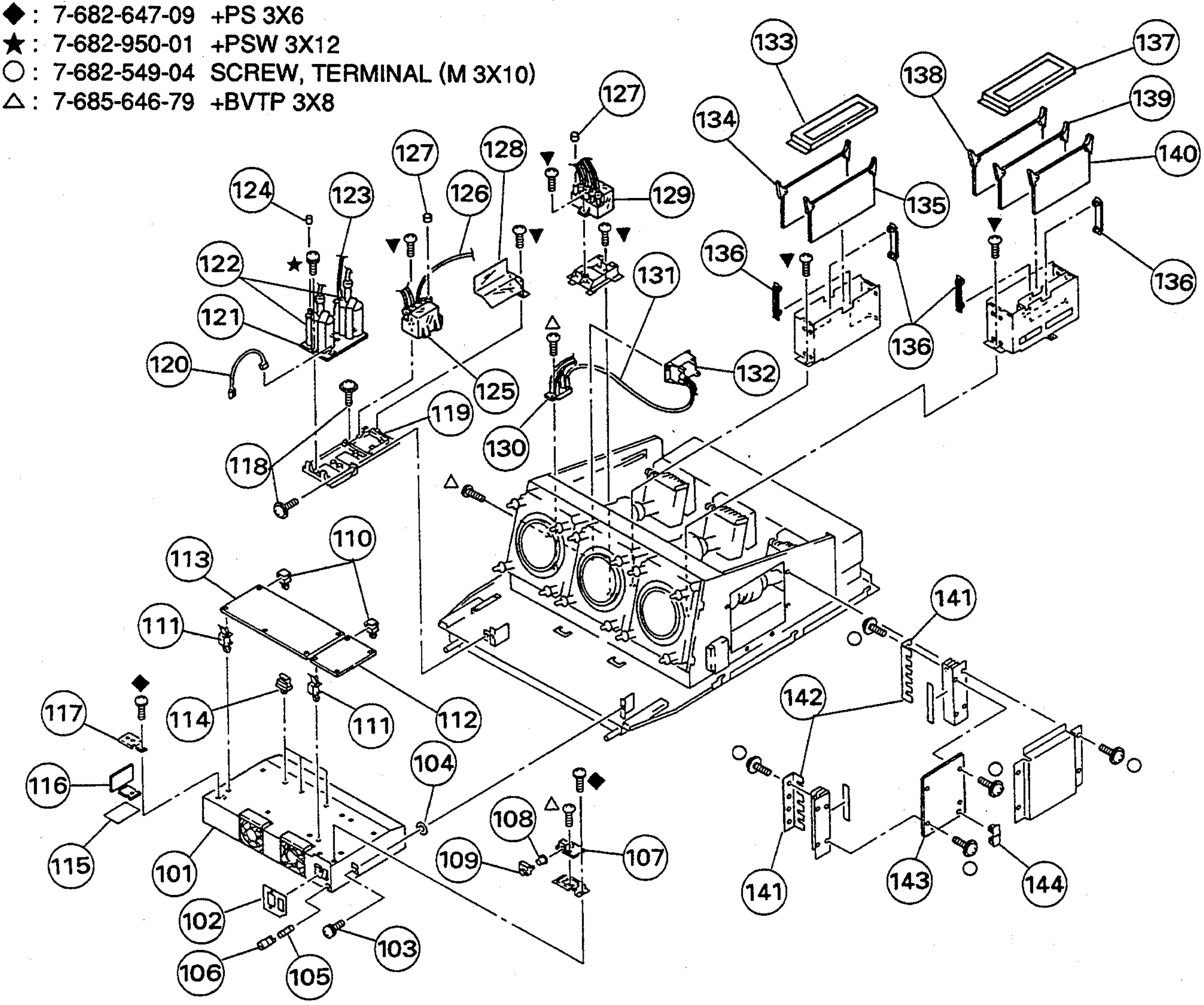
REF.NO.	PART NO.	DESCRIPTION	REMARK
51	1-698-641-11	FAN, DC	
52	*4-049-791-01	NET, FAN	
53	*4-395-528-01	HOLDER (C), TR	
54	*A-1346-343-A	E BOARD, COMPLETE	55,56
55	*A-1341-941-A	EEA BOARD, COMPLETE	
56	*A-1341-942-A	EEB BOARD, COMPLETE	
57	4-393-406-01	SHEET (R), RADIATION	
58	*4-395-553-01	HOLDER (A), TR	
59	*A-1346-342-A	DC BOARD, COMPLETE	60,61
60	*A-1341-937-A	DCA BOARD, COMPLETE	
61	*A-1341-939-A	DCC BOARD, COMPLETE	
62	4-049-788-01	HOLDER (DCV), TR	
63	*A-1390-522-A	NA BOARD, COMPLETE	
64	*4-374-987-01	GUIDE, LIGHT	
65	*4-381-686-01	BRACKET (B), BAR, OPTICAL	
66	1-698-640-11	FAN, DC	
67	*A-1390-255-A	L BOARD, COMPLETE	
68	*3-701-903-11	HOLDER, PC BOARD	
69	*3-703-141-00	HOLDER, PCB	
70	*4-382-848-01	HOLDER, PCB	
71	4-396-260-21	BOLT, SOCKET HEXAGON	
72	*A-1341-934-A	ED BOARD, COMPLETE	
73	*4-049-814-01	STOPPER	
74	*3-658-816-00	HINGE, FRONT	
75	*4-395-584-02	HOLDER, CONTROL PANEL	
76	*A-1341-935-A	DG BOARD, COMPLETE	
77	4-049-824-01	HOLDER (DG)	
78	4-050-400-01	SHEET (A), RADIATION	
79	1-473-443-21	CONTROL PANEL (VPH-1292Q/QM)	
	1-473-444-11	CONTROL PANEL (VPH-1292QMG)	

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

7-3. POWER BLOCK

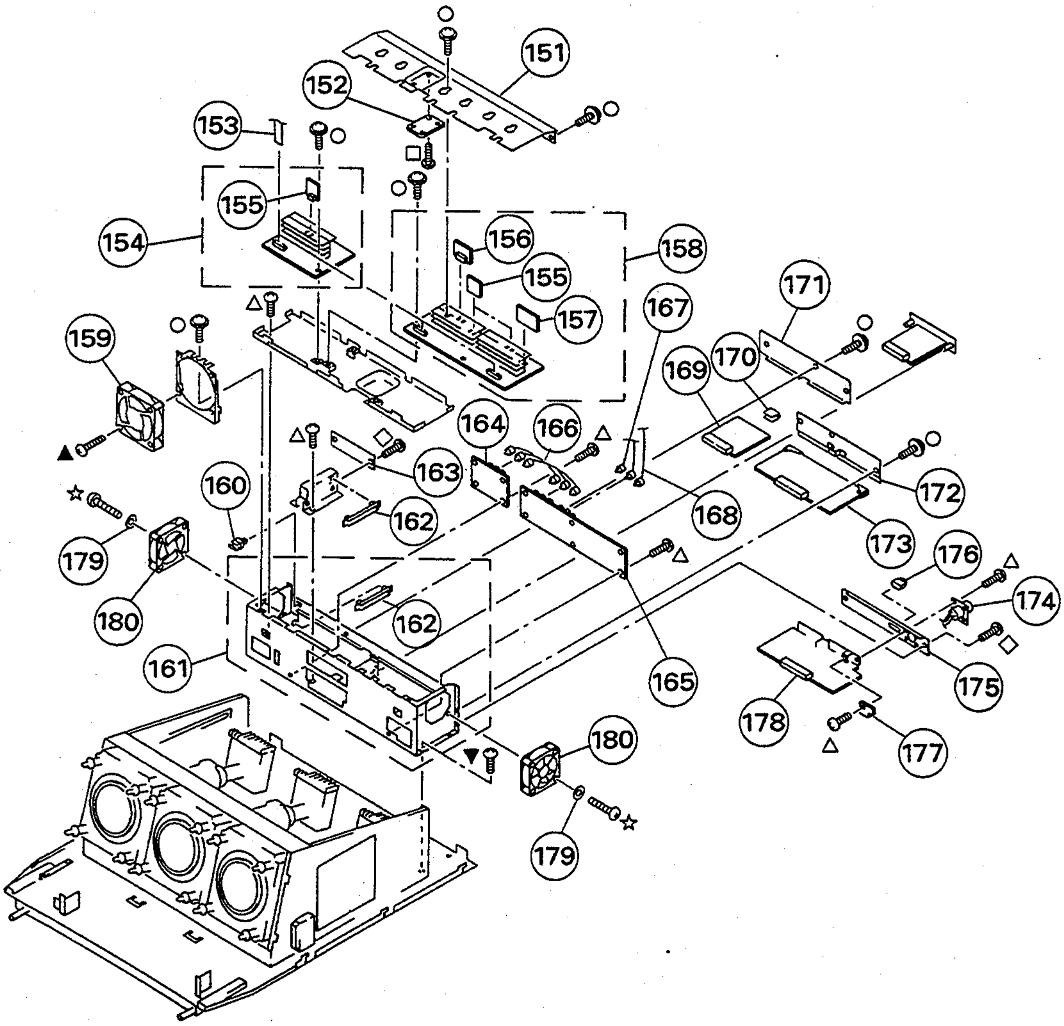
▼ : 7-685-660-79 +BVTP 4X10
◆ : 7-682-647-09 +PS 3X6
★ : 7-682-950-01 +PSW 3X12
○ : 7-682-549-04 SCREW, TERMINAL (M 3X10)
△ : 7-685-646-79 +BVTP 3X8



REF.NO.	PART NO.	DESCRIPTION	REMARK
101	⚠ 1-468-052-11	REGULATOR, SWITCHING	
102	4-049-785-01	PLETE, POWER	
103	4-033-713-01	SCREW (+PWH M4X10), PREVENTION	
104	4-033-712-01	WASHER	
105	⚠ 1-533-576-11	FUSE, TIME-LAG ((UL)ET) (6.3A/250V) (VPH-1292QM/QMG)	
	⚠ 1-533-694-11	FUSE (15A/250V) (VPH-1292Q)	
106	*1-533-703-11	HOLDER, FUSE (VPH-1292Q)	
107	*A-1390-256-A	NB BOARD, COMPLETE	
108	*4-374-987-01	GUIDE, LIGHT	
109	*4-381-686-01	BRACKET (B), BAR, OPTICAL	
110	*3-701-903-11	HOLDER, PC BOARD	
111	*3-703-141-00	HOLDER, PCB	
112	*A-1341-943-A	EA BOARD, COMPLETE	
113	*A-1195-096-A	PA BOARD, COMPLETE	
114	*3-659-682-00	HOLDER, PC BOARD	
115	4-393-406-01	SHEET (R), RADIATION	
116	*A-1190-196-A	PC BOARD, COMPLETE	
117	*4-044-541-02	HOLDER, PC	
118	3-701-810-21	SCREW, TERMINAL	
119	*4-043-149-01	BRACKET, HV	
120	1-900-215-39	TERMINAL ASSY, FASTON	
121	*A-1190-195-A	PB BOARD, COMPLETE	
122	⚠ 1-453-160-12	TRANSFORMER ASSY, FLYBACK (NX-3031)	
123	1-900-213-61	LEAD ASSY, FOCUS	
124	4-042-892-01	CAP, MV	
125	⚠ 1-453-108-31	DC BLOCK, HIGH-VOLTAGE	
126	⚠ 1-559-865-31	LEAD ASSY, HIGH-VOLTAGE	
127	4-373-137-01	CAP (Z), RUBBER	
128	*4-049-845-01	BARRIER, HV	
129	⚠ 1-453-108-11	DC BLOCK, HIGH-VOLTAGE	
130	1-223-976-11	RESISTOR ASSY (HIGH-VOLTAGE)	
131	⚠ 1-558-203-13	LEAD ASSY, HIGH VOLTAGE	
132	⚠ 1-235-625-11	CAP BLOCK, HIGH-VOLTAGE (HB-900)	
133	4-049-815-01	COVER (DE)	
134	*A-1346-338-A	DD BOARD, COMPLETE	
135	*A-1346-345-A	DE BOARD, COMPLETE	
136	*4-360-309-11	SUPPORT, PC BOARD	
137	4-049-816-01	COVER (YD)	
138	*A-1346-339-A	DB BOARD, COMPLETE	
139	*A-1346-344-A	DA BOARD, COMPLETE	
140	*A-1394-663-A	Y BOARD, COMPLETE (VPH-1292Q/QM)	
	*A-1394-693-A	Y BOARD, COMPLETE (VPH-1292QMG)	
141	4-049-823-01	HOLDER (EC), TR	
142	4-050-399-01	SHEET (B), RADIATION	
143	*A-1346-341-A	BC BOARD, COMPLETE	
144	*4-313-732-00	CLIP, HINGE, CIRCUIT BOARD	

7-4. C SHIELD BLOCK

▲ : 7-685-666-79 +BVTP 4X30
▼ : 7-685-660-79 +BVTP 4X10
○ : 7-682-549-04 SCREW, TERMINAL (M 3X10)
△ : 7-685-646-79 +BVTP 3X8
◇ : 7-682-550-09 +B 3X12
☐ : 7-685-647-79 +BVTP 3X10
☆ : 7-685-167-19 +P 4X35



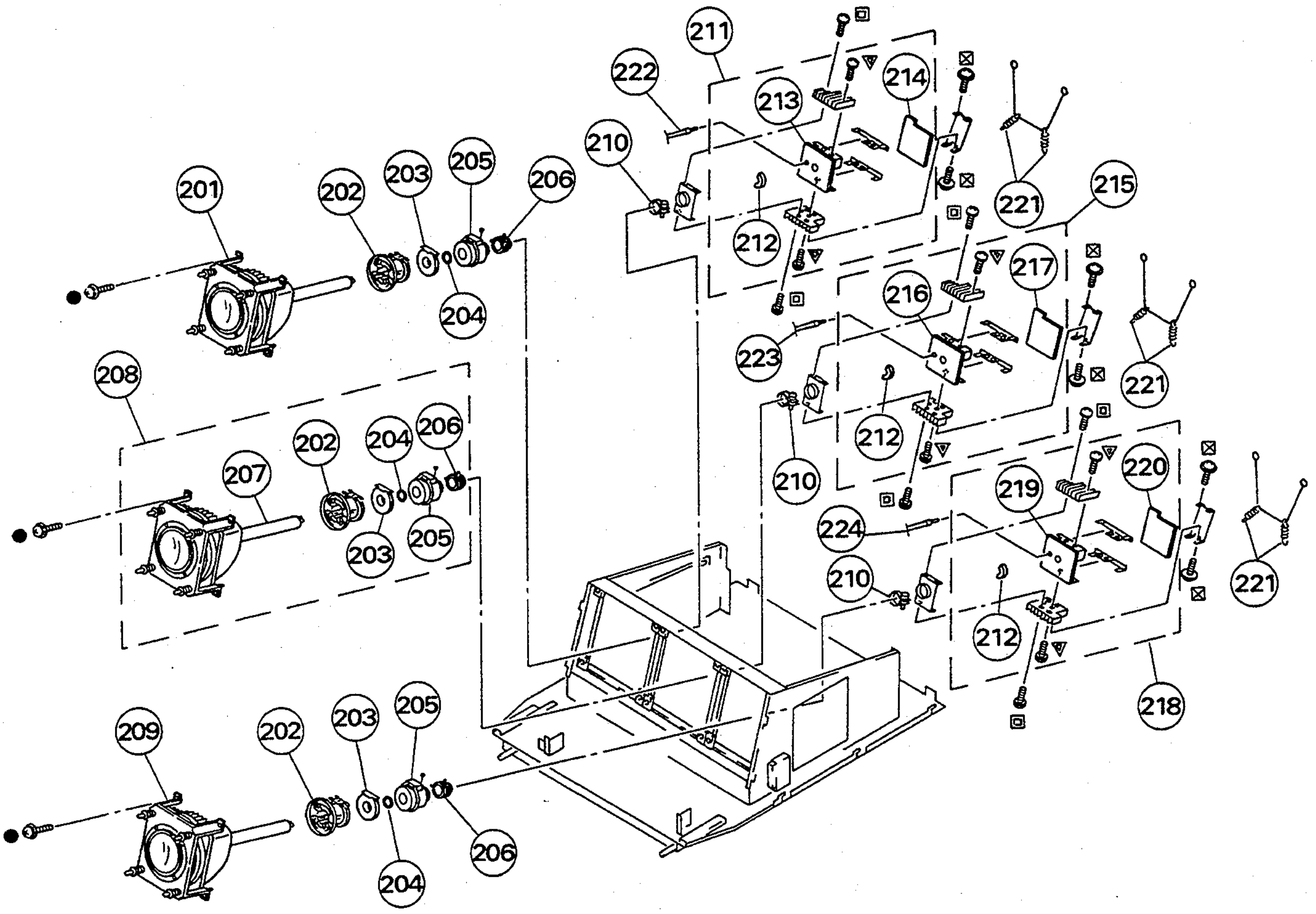
REF.NO.	PART NO.	DESCRIPTION	REMARK
151	*4-049-820-01	COVER (CL), SHIELD	
152	*A-1331-162-A	CFB BOARD, COMPLETE	
153	1-900-212-82	CABLE, FLAT 24P	
154	*A-1346-397-A	EBB BOARD, COMPLETE	155
155	*A-1341-924-A	EBA BOARD, COMPLETE	
156	*A-1341-925-A	EBC BOARD, COMPLETE	
157	*A-1280-421-A	EBD BOARD, COMPLETE	
158	*A-1346-398-A	EBRG BOARD, COMPLETE	155-157
159	1-698-641-11	FAN, DC	
160	*3-659-682-00	HOLDER, PC BOARD	
161	*X-4032-918-1	SHIELD ASSY, C	162
162	*4-360-309-11	SUPPORT, PC BOARD	
163	*4-395-530-01	PLATE (Q)	
164	*A-1270-304-A	QM BOARD, COMPLETE	
165	*A-1130-976-A	BM BOARD, COMPLETE	
166	*1-575-091-11	CABLE, P-P	
167	*1-775-920-11	CABLE (PIN MINIATURE PIN)	
168	*1-775-921-11	CABLE (PIN MINIATURE PIN)	
169	*A-1130-978-A	BC BOARD, COMPLETE	
170	*4-353-708-00	HOOK, FINGER	
171	*4-395-558-01	PLATE (Z)	
172	*4-395-559-01	PLATE (B)	
173	*A-1135-692-A	BA BOARD, COMPLETE	
174	1-575-092-11	CONNECTOR ASSY, MULTI 14P	
175	4-395-583-31	PANEL (B), CONNECTOR	(VPH-1292Q/QM)
	4-395-583-41	PANEL (B), CONNECTOR	(VPH-1292QMG)
176	*3-673-948-11	CAP, DUST	
177	*A-1131-162-A	BD BOARD, COMPLETE	
178	*A-1135-822-A	BB BOARD, COMPLETE (VPH-1292Q/QM)	
	*A-1135-841-A	BB BOARD, COMPLETE (VPH-1292QMG)	
179	4-339-871-00	WASHER	
180	1-698-640-11	FAN, DC	

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

7-5. PICTURE TUBE

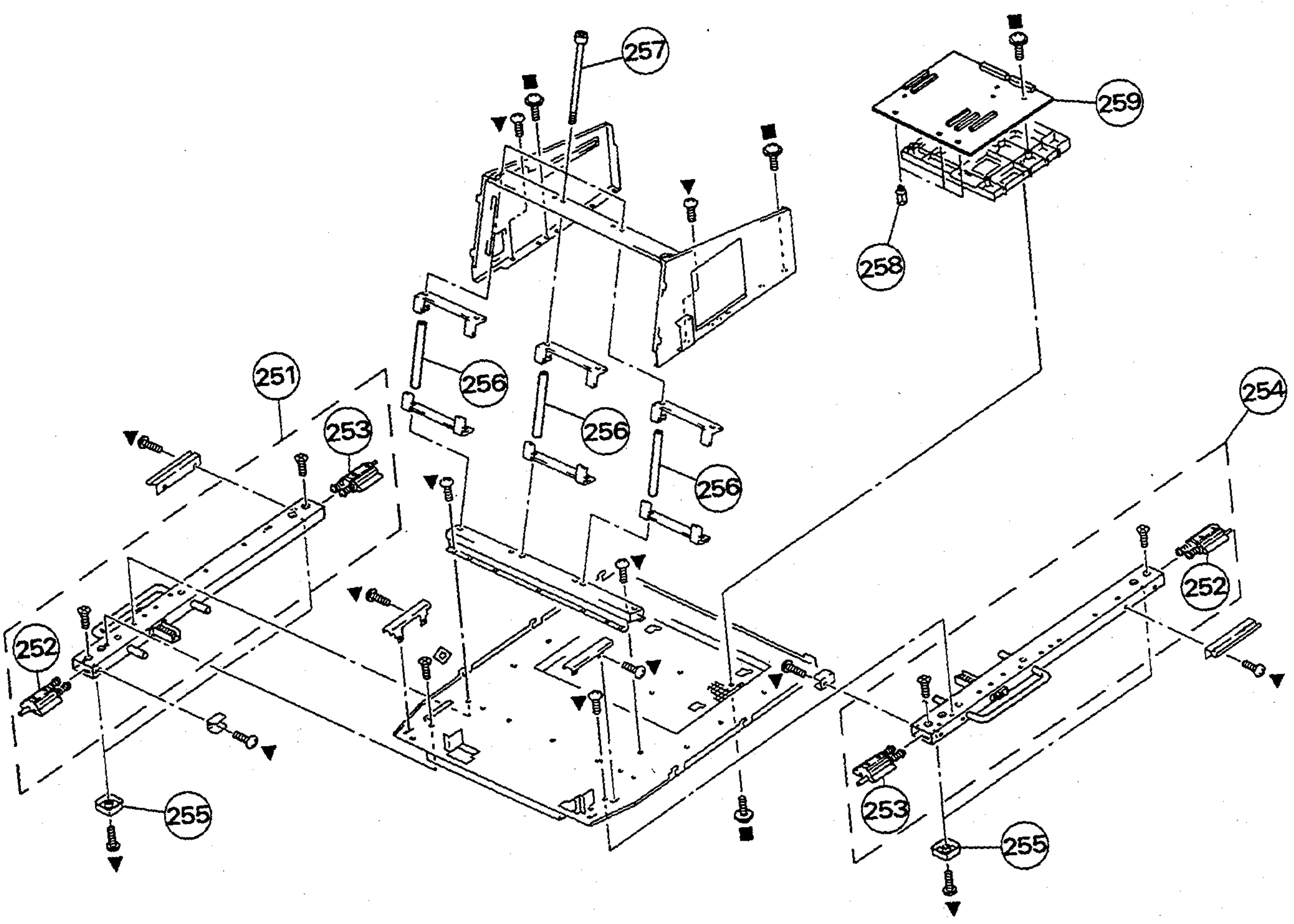
● : 7-682-665-09 +PSW 4X16
▽ : 7-682-654-01 +PS 3X25
▣ : 7-682-648-01 +PS 3X8
☒ : 7-682-546-04 M 3X5



REF.NO.	PART NO.	DESCRIPTION	REMARK
201	⚠8-733-145-05	PICTURE TUBE 09MFX3(B)	
202	⚠8-451-468-11	DEFLECTION YOKE (Y636PNN)	
203	⚠1-452-810-11	NECK ASSEMBLY, NA-3614	
204	4-050-317-01	WEDGE	
205	⚠1-452-811-11	NECK ASSEMBLY, NA-3615	
206	⚠1-452-429-41	NECK ASSY, PICTURE TUBE (NA366)	
207	⚠8-733-144-05	PICTURE TUBE 09MFX3(G)	
208	A-1020-745-A	PICTURE TUBE (G) ASSY	202-207
209	⚠8-733-146-05	PICTURE TUBE 09MFX3(R)	
210	X-4378-637-1	BAND ASSY	
211	*A-1482-032-A	CB BLOCK ASSY	212,213,214
212	*4-049-783-01	SUPPORT, SOCKET	
213	*A-1335-063-A	CBB BOARD, COMPLETE	
214	*A-1335-064-A	CAB BOARD, COMPLETE	
215	*A-1482-031-A	CG BLOCK ASSY	212,216,217
216	*A-1335-061-A	CBG BOARD, COMPLETE	
217	*A-1335-062-A	CAG BOARD, COMPLETE	
218	*A-1482-030-A	CR BLOCK ASSY	212,219,220
219	*A-1335-058-A	CBR BOARD, COMPLETE	
220	*A-1335-060-A	CAR BOARD, COMPLETE	
221	*4-303-774-99	SPRING	
222	*1-575-099-41	LEAD ASSY, SIELD HIGH VOLTAGE	
223	*1-575-099-31	LEAD ASSY, SIELD HIGH VOLTAGE	
224	*1-575-099-21	LEAD ASSY, SIELD HIGH VOLTAGE	

7-6. CHASSIS

▼ : 7-685-660-79 +BVTP 4X10
■ : 7-685-663-79 SCREW (DIA. 4X16), TAPPING
◈ : 7-682-248-09 +K 3X8



REF.NO.	PART NO.	DESCRIPTION	REMARK
251	*X-4032-922-1	STAY (L) ASSY, BOTTOM	252,253
252	*X-4032-913-1	BLOCK (L) ASSY, LOCK	
253	*X-4032-912-1	BLOCK (R) ASSY, LOCK	
254	*X-4032-923-1	STAY (R) ASSY, BOTTOM	252,253
255	4-043-335-01	FOOT (RE)	

REF.NO.	PART NO.	DESCRIPTION	REMARK
256	*4-049-784-01	COVER, SHAFT	
257	4-050-476-01	SHAFT	
258	*3-687-542-11	SPACER, PC BOARD SPACE	
259	*A-1341-927-A	DM BOARD, COMPLETE	

BM **BC**

SECTION 8
ELECTRICAL PARTS LIST

NOTE:

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F : nonflammable

CAPACITORS
- MF : µ F , PF : µµ F

COILS
- MMH : mH , UH : µH

When indicating parts by reference number, please include the board name.

- The components identified by ⊠ in this manual have been carefully factory- selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- There are some cases the reference number on one board overlaps on the other board. Therefore, when ordering parts by the reference number, please include the board name.

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1130-976-A	BM BOARD, COMPLETE	
		******************	
		<CONNECTOR>	
CN62	*1-564-508-11	PLUG, CONNECTOR 5P	
CN63	*1-564-509-11	PLUG, CONNECTOR 6P	
CN64	*1-564-515-11	PLUG, CONNECTOR 12P	
CN65	*1-568-979-11	CONNECTOR 30P	
CN66	*1-568-981-11	CONNECTOR, MALE 64P	
CN67	*1-568-982-11	CONNECTOR, FEMALE 96P	
CN68	*1-568-984-11	CONNECTOR, MALE 96P	
CN69	*1-568-985-11	CONNECTOR, FEMALE 64P	
CN80	*1-568-982-11	CONNECTOR, FEMALE 96P	
CN81	*1-568-985-11	CONNECTOR, FEMALE 64P	
		<JACK>	
J1	*1-526-575-00	SOCKET, PLUG 1P	
J2	*1-526-575-00	SOCKET, PLUG 1P	
J3	*1-526-575-00	SOCKET, PLUG 1P	
J4	*1-526-575-00	SOCKET, PLUG 1P	
J5	*1-526-575-00	SOCKET, PLUG 1P	
J6	*1-526-575-00	SOCKET, PLUG 1P	

****

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1130-978-A	BC BOARD, COMPLETE	
		******************	
		<CAPACITOR>	
C501	1-101-004-00	CERAMIC 0.01MF 50V	
C502	1-101-004-00	CERAMIC 0.01MF 50V	
C503	1-101-004-00	CERAMIC 0.01MF 50V	
C504	1-101-004-00	CERAMIC 0.01MF 50V	
C505	1-124-927-11	ELECT 4.7MF 20% 50V	
C506	1-124-927-11	ELECT 4.7MF 20% 50V	
C507	1-124-927-11	ELECT 4.7MF 20% 50V	
C508	1-124-927-11	ELECT 4.7MF 20% 50V	
C509	1-126-933-11	ELECT 100MF 20% 16V	
C510	1-126-964-11	ELECT 10MF 20% 50V	
C511	1-101-004-00	CERAMIC 0.01MF 50V	
		<CONNECTOR>	
CN74	*1-568-981-11	CONNECTOR, MALE 64P	
		<DIODE>	
D501	8-719-911-19	DIODE 1SS119-25	
D502	8-719-911-19	DIODE 1SS119-25	
D503	8-719-911-19	DIODE 1SS119-25	
D504	8-719-911-19	DIODE 1SS119-25	
D505	8-719-911-19	DIODE 1SS119-25	
D506	8-719-911-19	DIODE 1SS119-25	
D507	8-719-911-19	DIODE 1SS119-25	
		<IC>	
IC501	8-759-007-21	IC MC74HC4053N	
IC502	8-759-001-00	IC MC74HC132N	
IC503	8-759-001-00	IC MC74HC132N	
IC504	8-759-054-26	IC HD74HC123AP	
IC505	8-759-701-79	IC NJM7812FA	
		<COIL>	
L501	1-459-155-00	COIL (WITH CORE) 45UH	
		<TRANSISTOR>	
Q501	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q502	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q503	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q504	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q505	8-729-119-78	TRANSISTOR 2SC2785-HFE	
		<RESISTOR>	
R501	1-247-807-31	CARBON 100 5% 1/4W	
R502	1-247-807-31	CARBON 100 5% 1/4W	
R503	1-249-437-11	CARBON 47K 5% 1/4W	
R504	1-249-437-11	CARBON 47K 5% 1/4W	
R505	1-249-437-11	CARBON 47K 5% 1/4W	
R506	1-249-429-11	CARBON 10K 5% 1/4W	
R507	1-249-421-11	CARBON 2.2K 5% 1/4W	
R508	1-249-429-11	CARBON 10K 5% 1/4W	
R509	1-249-429-11	CARBON 10K 5% 1/4W	
R510	1-249-429-11	CARBON 10K 5% 1/4W	
R511	1-249-437-11	CARBON 47K 5% 1/4W	
R512	1-247-807-31	CARBON 100 5% 1/4W	
R513	1-249-424-11	CARBON 3.9K 5% 1/4W	
R514	1-247-807-31	CARBON 100 5% 1/4W	
R515	1-249-437-11	CARBON 47K 5% 1/4W	
R516	1-249-424-11	CARBON 3.9K 5% 1/4W	
R517	1-249-429-11	CARBON 10K 5% 1/4W	
R518	1-249-435-11	CARBON 33K 5% 1/4W	
R519	1-249-435-11	CARBON 33K 5% 1/4W	
R520	1-249-421-11	CARBON 2.2K 5% 1/4W	
R521	1-249-429-11	CARBON 10K 5% 1/4W	
R522	1-249-429-11	CARBON 10K 5% 1/4W	

<RELAY>

REF.NO.	PART NO.	DESCRIPTION	REMARK
RY501	1-515-757-11	RELAY	
RY502	1-515-757-11	RELAY	
RY503	1-515-757-11	RELAY	

****

*A-1131-162-A BD BOARD, COMPLETE
****

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN84	1-564-517-11	PLUG, CONNECTOR 2P	

<SWITCH>

REF.NO.	PART NO.	DESCRIPTION	REMARK
S1	1-554-481-00	SWITCH, SLIDE	

****

*A-1135-692-A BA BOARD, COMPLETE
****

4-382-854-11 SCREW (M3X10), P, SW (+)

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
BA-1	*1-568-984-11	CONNECTOR, MALE 96P	

<FILTER>

REF.NO.	PART NO.	DESCRIPTION	REMARK
BPF1	1-236-366-11	MODULE, TRAP	
BPF2	1-236-365-11	MODULE, TRAP	

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C1	1-126-967-11	ELECT	47MF	20%	50V	
C2	1-126-967-11	ELECT	47MF	20%	50V	
C3	1-126-967-11	ELECT	47MF	20%	50V	
C7	1-126-964-11	ELECT	10MF	20%	50V	
C8	1-124-122-11	ELECT	100MF	20%	50V	
C9	1-124-122-11	ELECT	100MF	20%	50V	
C10	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C11	1-126-964-11	ELECT	10MF	20%	50V	
C12	1-126-967-11	ELECT	47MF	20%	50V	
C13	1-126-967-11	ELECT	47MF	20%	50V	
C14	1-126-967-11	ELECT	47MF	20%	50V	
C15	1-126-967-11	ELECT	47MF	20%	50V	
C16	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C17	1-126-967-11	ELECT	47MF	20%	50V	
C18	1-126-967-11	ELECT	47MF	20%	50V	
C23	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C24	1-126-967-11	ELECT	47MF	20%	50V	
C25	1-126-967-11	ELECT	47MF	20%	50V	
C26	1-126-967-11	ELECT	47MF	20%	50V	
C27	1-126-967-11	ELECT	47MF	20%	50V	
C28	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C29	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C30	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C31	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C32	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C33	1-126-964-11	ELECT	10MF	20%	50V	
C34	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	
C35	1-163-093-00	CERAMIC CHIP	10PF	5%	50V	
C36	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C37	1-124-903-11	ELECT	1MF	20%	50V	
C39	1-163-119-00	CERAMIC CHIP	120PF	5%	50V	
C40	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C41	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C42	1-163-099-00	CERAMIC CHIP	18PF	5%	50V	
C43	1-126-964-11	ELECT	10MF	20%	50V	
C44	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C45	1-163-245-11	CERAMIC CHIP	56PF	5%	50V	
C46	1-126-940-11	ELECT	330MF	20%	16V	
C47	1-126-940-11	ELECT	330MF	20%	16V	
C48	1-163-035-00	CERAMIC CHIP	0.047MF		50V	
C49	1-136-153-00	FILM	0.01MF	5%	50V	
C50	1-163-033-91	CERAMIC CHIP	0.022MF		50V	
C51	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C52	1-163-119-00	CERAMIC CHIP	120PF	5%	50V	
C53	1-163-241-11	CERAMIC CHIP	39PF	5%	50V	
C54	1-163-099-00	CERAMIC CHIP	18PF	5%	50V	
C55	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C56	1-163-099-00	CERAMIC CHIP	18PF	5%	50V	
C57	1-163-119-00	CERAMIC CHIP	120PF	5%	50V	
C58	1-163-113-00	CERAMIC CHIP	68PF	5%	50V	
C59	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C60	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C61	1-136-177-00	FILM	1MF	5%	50V	
C62	1-136-177-00	FILM	1MF	5%	50V	
C63	1-124-122-11	ELECT	100MF	20%	50V	
C67	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	
C68	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	
C69	1-163-120-00	CERAMIC CHIP	130PF	5%	50V	
C70	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	
C71	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	
C72	1-124-927-11	ELECT	4.7MF	20%	50V	
C73	1-124-903-11	ELECT	1MF	20%	50V	
C74	1-136-171-00	FILM	0.33MF	5%	50V	
C75	1-137-368-11	FILM	0.0047MF	5%	50V	
C76	1-136-157-00	FILM	0.022MF	5%	50V	
C77	1-136-157-00	FILM	0.022MF	5%	50V	
C78	1-163-119-00	CERAMIC CHIP	120PF	5%	50V	
C79	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C82	1-136-177-00	FILM	1MF	5%	50V	
C83	1-126-964-11	ELECT	10MF	20%	50V	
C84	1-126-967-11	ELECT	47MF	20%	50V	
C85	1-126-964-11	ELECT	10MF	20%	50V	
C86	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C87	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C88	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C89	1-164-161-11	CERAMIC CHIP	0.0022MF		50V	
C90	1-124-122-11	ELECT	100MF	20%	50V	
C91	1-163-103-00	CERAMIC CHIP	27PF	5%	50V	
C104	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C106	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V	
C201	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C202	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C203	1-136-157-00	FILM	0.022MF	5%	50V	
C204	1-124-927-11	ELECT	4.7MF	20%	50V	
C205	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	
C207	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V	
C208	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C211	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C212	1-163-224-11	CERAMIC CHIP	7PF	0.25PF	50V	
C213	1-124-122-11	ELECT	100MF	20%	50V	
C214	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C215	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	

BA

REF.NO.	PART NO.	DESCRIPTION			REMARK
C216	1-124-122-11	ELECT	100MF	20%	50V
C217	1-124-122-11	ELECT	100MF	20%	50V
C218	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C219	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C220	1-124-122-11	ELECT	100MF	20%	50V
C221	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C222	1-124-122-11	ELECT	100MF	20%	50V
C223	1-124-122-11	ELECT	100MF	20%	50V
C224	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C229	1-126-964-11	ELECT	10MF	20%	50V
C230	1-124-122-11	ELECT	100MF	20%	50V
C231	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C234	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C235	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C236	1-126-964-11	ELECT	10MF	20%	50V
C237	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C238	1-126-964-11	ELECT	10MF	20%	50V
C239	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C240	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C241	1-124-927-11	ELECT	4.7MF	20%	50V
C242	1-126-964-11	ELECT	10MF	20%	50V
C243	1-126-964-11	ELECT	10MF	20%	50V
C244	1-126-964-11	ELECT	10MF	20%	50V
C301	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C302	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C303	1-128-551-11	ELECT	22MF	20%	50V
C304	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C305	1-128-551-11	ELECT	22MF	20%	50V
C306	1-126-967-11	ELECT	47MF	20%	50V
C307	1-136-169-00	FILM	0.22MF	5%	50V
C308	1-124-902-00	ELECT	0.47MF	20%	50V
C309	1-124-902-00	ELECT	0.47MF	20%	50V
C310	1-124-902-00	ELECT	0.47MF	20%	50V
C311	1-128-551-11	ELECT	22MF	20%	50V
C312	1-126-967-11	ELECT	47MF	20%	50V
C313	1-126-967-11	ELECT	47MF	20%	50V
C314	1-126-967-11	ELECT	47MF	20%	50V
C315	1-126-967-11	ELECT	47MF	20%	50V
C316	1-124-902-00	ELECT	0.47MF	20%	50V
C317	1-126-933-11	ELECT	100MF	20%	16V
C318	1-126-967-11	ELECT	47MF	20%	50V
C319	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C320	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C321	1-126-964-11	ELECT	10MF	20%	50V
C322	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C323	1-126-964-11	ELECT	10MF	20%	50V
C324	1-124-902-00	ELECT	0.47MF	20%	50V
C325	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C326	1-163-033-91	CERAMIC CHIP	0.022MF		50V
C327	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C328	1-163-033-91	CERAMIC CHIP	0.022MF		50V
C329	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C330	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C331	1-136-177-00	FILM	1MF	5%	50V
C332	1-136-169-00	FILM	0.22MF	5%	50V
C333	1-126-964-11	ELECT	10MF	20%	50V
C334	1-126-967-11	ELECT	47MF	20%	50V
C335	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C336	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C337	1-163-089-00	CERAMIC CHIP	6PF	0.25PF	50V
C338	1-126-964-11	ELECT	10MF	20%	50V
C339	1-124-903-11	ELECT	1MF	20%	50V
C340	1-124-903-11	ELECT	1MF	20%	50V
C341	1-126-964-11	ELECT	10MF	20%	50V
C342	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C343	1-126-967-11	ELECT	47MF	20%	50V
C344	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C346	1-126-964-11	ELECT	10MF	20%	50V
C347	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C351	1-124-903-11	ELECT	1MF	20%	50V
C352	1-126-964-11	ELECT	10MF	20%	50V
		<TRIMMER>			
CT101	1-141-181-11	CAP,TRIMMER			
CT102	1-141-181-11	CAP,TRIMMER			
		<DIODE>			
D1	8-719-801-78	DIODE 1SS184			
D2	8-719-801-78	DIODE 1SS184			
D3	8-719-801-78	DIODE 1SS184			
D4	8-719-801-78	DIODE 1SS184			
D5	8-719-801-78	DIODE 1SS184			
D6	8-719-104-34	DIODE 1S2836			
D7	8-719-801-78	DIODE 1SS184			
D8	8-719-801-78	DIODE 1SS184			
D9	8-719-801-78	DIODE 1SS184			
D10	8-719-801-78	DIODE 1SS184			
D11	8-719-800-76	DIODE 1SS226			
D12	8-719-801-78	DIODE 1SS184			
D13	8-719-801-78	DIODE 1SS184			
D14	8-719-801-78	DIODE 1SS184			
D101	8-719-105-46	DIODE RD3.3M-B2			
D102	8-719-105-82	DIODE RD5.1M-B2			
D103	8-719-801-78	DIODE 1SS184			
D107	8-719-801-78	DIODE 1SS184			
D108	8-719-900-95	DIODE V09G			
D109	8-719-900-95	DIODE V09G			
D110	8-719-105-99	DIODE RD6.2M-B1			
D112	8-719-801-78	DIODE 1SS184			
D113	8-719-801-78	DIODE 1SS184			
D118	8-719-104-34	DIODE 1S2836			
D132	8-719-104-34	DIODE 1S2836			
D201	8-719-801-78	DIODE 1SS184			
D301	8-719-801-78	DIODE 1SS184			
D303	8-719-801-78	DIODE 1SS184			
D304	8-719-105-63	DIODE RD4.3M-B1			
D350	8-719-801-78	DIODE 1SS184			
D351	8-719-801-78	DIODE 1SS184			
D352	8-719-801-78	DIODE 1SS184			
		<DELAY LINE>			
DL101	1-415-122-31	DELAY LINE, 1H (PAL)			
DL102	1-402-679-11	DELAY LINE			
DL103	1-403-576-11	DELAY LINE			
DL104	1-403-576-11	DELAY LINE			
		<FILTER>			
FL1	1-236-164-11	ENCAPSULATED COMPONENT			
FL2	1-236-620-11	FILTER, LOW PASS			
FL3	1-236-620-11	FILTER, LOW PASS			
FL4	1-236-620-11	FILTER, LOW PASS			
		<IC>			

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC1	8-759-300-71	IC HD14053BFP	
IC2	8-759-513-47	IC TDA4555/V1	
IC3	8-759-932-16	IC TDA4565	
IC5	8-759-710-42	IC NJM2228M	
IC6	8-759-208-94	IC CX-894	
IC7	8-759-300-71	IC HD14053BFP	
IC8	8-752-034-85	IC CXA1216P	
IC9	8-759-100-96	IC UPC4558G2	
IC10	8-741-765-01	FILTER, DIGITAL COM SBX1765-01	
IC11	8-759-979-16	IC CX-7916	
IC12	1-808-891-11	MODULE SNY-9202	
IC13	8-759-100-96	IC UPC4558G2	
IC14	8-759-929-84	IC SN74LS12NS	
IC15	1-809-576-11	MODULE, H8B7178B	
IC16	8-759-701-79	IC NJM7812FA	
IC17	8-759-504-46	IC PQ05RF1	
IC19	8-759-926-06	IC SN74HC126ANS	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L101	1-410-470-11	INDUCTOR 10UH	
L102	1-410-209-51	INDUCTOR CHIP 27UH	
L103	1-410-466-41	INDUCTOR 4.7UH	
L104	1-408-406-00	INDUCTOR 5.6UH	
L105	1-404-539-11	COIL	
L106	1-404-554-11	COIL	
L107	1-404-554-11	COIL	
L108	1-404-554-11	COIL	
L109	1-408-397-00	INDUCTOR 1UH	
L110	1-410-466-41	INDUCTOR 4.7UH	
L111	1-410-466-41	INDUCTOR 4.7UH	
L112	1-410-466-41	INDUCTOR 4.7UH	
L114	1-459-155-00	COIL (WITH CORE) 45UH	
L115	1-459-155-00	COIL (WITH CORE) 45UH	
L116	1-410-466-41	INDUCTOR 4.7UH	
L120	1-404-584-11	COIL	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q2	8-729-901-01	TRANSISTOR DTC144EK	
Q3	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q7	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q8	8-729-901-01	TRANSISTOR DTC144EK	
Q9	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q10	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q11	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q12	8-729-216-22	TRANSISTOR 2SA1162-G	
Q13	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q14	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q15	8-729-901-01	TRANSISTOR DTC144EK	
Q16	8-729-901-01	TRANSISTOR DTC144EK	
Q17	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q18	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q19	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q20	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q21	8-729-901-01	TRANSISTOR DTC144EK	
Q22	8-729-901-01	TRANSISTOR DTC144EK	
Q23	8-729-901-01	TRANSISTOR DTC144EK	
Q24	8-729-901-01	TRANSISTOR DTC144EK	
Q25	8-729-901-01	TRANSISTOR DTC144EK	
Q26	8-729-901-01	TRANSISTOR DTC144EK	
Q27	8-729-901-01	TRANSISTOR DTC144EK	
Q28	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q29	8-729-216-22	TRANSISTOR 2SA1162-G	
Q30	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q31	8-729-216-22	TRANSISTOR 2SA1162-G	
Q32	8-729-216-22	TRANSISTOR 2SA1162-G	
Q33	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q34	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q35	8-729-901-01	TRANSISTOR DTC144EK	
Q36	8-729-216-22	TRANSISTOR 2SA1162-G	
Q37	8-729-901-01	TRANSISTOR DTC144EK	
Q38	8-729-901-01	TRANSISTOR DTC144EK	
Q39	8-729-116-06	TRANSISTOR 2SK160-K6	
Q40	8-729-116-06	TRANSISTOR 2SK160-K6	
Q41	8-729-901-01	TRANSISTOR DTC144EK	
Q42	8-729-901-01	TRANSISTOR DTC144EK	
Q43	8-729-901-01	TRANSISTOR DTC144EK	
Q45	8-729-901-01	TRANSISTOR DTC144EK	
Q48	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q49	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q50	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q51	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q52	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q118	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q119	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q120	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q152	8-729-901-01	TRANSISTOR DTC144EK	
Q201	8-729-901-01	TRANSISTOR DTC144EK	
Q202	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q203	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q204	8-729-901-01	TRANSISTOR DTC144EK	
Q205	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q206	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q207	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q208	8-729-901-01	TRANSISTOR DTC144EK	
Q209	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q210	8-729-216-22	TRANSISTOR 2SA1162-G	
Q212	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q213	8-729-216-22	TRANSISTOR 2SA1162-G	
Q301	8-729-140-96	TRANSISTOR 2SD774-34	
Q302	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q303	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q304	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q305	8-729-901-01	TRANSISTOR DTC144EK	
Q306	8-729-901-01	TRANSISTOR DTC144EK	
Q307	8-729-901-01	TRANSISTOR DTC144EK	
Q308	8-729-901-01	TRANSISTOR DTC144EK	
Q309	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q310	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q311	8-729-901-01	TRANSISTOR DTC144EK	
Q312	8-729-901-01	TRANSISTOR DTC144EK	
Q313	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q314	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q315	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q316	8-729-901-01	TRANSISTOR DTC144EK	
Q317	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q318	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q319	8-729-901-01	TRANSISTOR DTC144EK	
Q320	8-729-901-01	TRANSISTOR DTC144EK	
Q321	8-729-901-01	TRANSISTOR DTC144EK	
Q323	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q324	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q325	8-729-901-01	TRANSISTOR DTC144EK	
Q326	8-729-901-01	TRANSISTOR DTC144EK	
Q327	8-729-230-49	TRANSISTOR 2SC2712-YG	

BA

REF.NO.	PART NO.	DESCRIPTION				REMARK
Q329	8-729-116-06	TRANSISTOR	2SK160-K6			
Q330	8-729-230-49	TRANSISTOR	2SC2712-YG			
Q336	8-729-230-49	TRANSISTOR	2SC2712-YG			
Q337	8-729-216-22	TRANSISTOR	2SA1162-G			
Q338	8-729-230-49	TRANSISTOR	2SC2712-YG			
Q340	8-729-901-01	TRANSISTOR	DTC144EK			
Q350	8-729-901-01	TRANSISTOR	DTC144EK			
Q351	8-729-230-49	TRANSISTOR	2SC2712-YG			
Q352	8-729-230-49	TRANSISTOR	2SC2712-YG			
Q362	8-729-230-49	TRANSISTOR	2SC2712-YG			
		<RESISTOR>				
R1	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R2	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R3	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R4	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R6	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R7	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R8	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R11	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R12	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R13	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R14	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R15	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R16	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R17	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R18	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R19	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R20	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R21	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R22	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R23	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R24	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R25	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R26	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R27	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R29	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R30	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R31	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R32	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R33	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R34	1-216-047-91	METAL GLAZE	820	5%	1/10W	
R38	1-216-047-91	METAL GLAZE	820	5%	1/10W	
R39	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R40	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R41	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R42	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R43	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R44	1-216-047-91	METAL GLAZE	820	5%	1/10W	
R45	1-216-641-11	METAL CHIP	390	0.50%	1/10W	
R46	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R47	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R48	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R49	1-216-635-11	METAL CHIP	220	0.50%	1/10W	
R50	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R51	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R52	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R53	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R54	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R55	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R56	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R57	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R58	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R59	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R60	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R61	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R63	1-216-047-91	METAL GLAZE	820	5%	1/10W	
R64	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R65	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R66	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R67	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R68	1-216-047-91	METAL GLAZE	820	5%	1/10W	
R69	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R70	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R71	1-216-047-91	METAL GLAZE	820	5%	1/10W	
R72	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R73	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R74	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R75	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R76	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R77	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R78	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R80	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R81	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R82	1-216-639-11	METAL CHIP	330	0.50%	1/10W	
R83	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R84	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R85	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R86	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R87	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R88	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R89	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R90	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R91	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R92	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R93	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R94	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R95	1-216-641-11	METAL CHIP	390	0.50%	1/10W	
R101	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R102	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R103	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R104	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R105	1-216-066-00	METAL GLAZE	5.1K	5%	1/10W	
R106	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R107	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R108	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R116	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R117	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R118	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R119	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R120	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R121	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R122	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R123	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R124	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R125	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R126	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R127	1-216-047-91	METAL GLAZE	820	5%	1/10W	
R128	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R129	1-216-635-11	METAL CHIP	220	0.50%	1/10W	
R130	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R131	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R132	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R133	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R134	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R135	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R141	1-216-073-00	METAL GLAZE	10K	5%	1/10W	

BA

REF.NO.	PART NO.	DESCRIPTION				REMARK
R142	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R143	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R145	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R146	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R148	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R149	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R150	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R201	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R202	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R203	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R204	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R205	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R206	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R207	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R208	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R209	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R210	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R211	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R212	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R213	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R214	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R215	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R216	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R217	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R218	1-216-641-11	METAL CHIP	390	0.50%	1/10W	
R219	1-216-023-00	METAL GLAZE	82	5%	1/10W	
R220	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R221	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R222	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R223	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R224	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R225	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R226	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R227	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R228	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R229	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R230	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R231	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R232	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R233	1-216-641-11	METAL CHIP	390	0.50%	1/10W	
R234	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R235	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R236	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R237	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R238	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R239	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R240	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R241	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R242	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R244	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R248	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R249	1-216-295-91	CONDUCTOR, CHIP				
R290	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R301	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R302	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R303	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R304	1-216-119-00	METAL GLAZE	820K	5%	1/10W	
R305	1-216-005-00	METAL GLAZE	15	5%	1/10W	
R306	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R307	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R308	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R309	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R310	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R311	1-216-037-00	METAL GLAZE	330	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R312	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R313	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R314	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R315	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R316	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R317	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R318	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R319	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R320	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R321	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R322	1-216-689-11	METAL CHIP	39K	0.50%	1/10W	
R323	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R324	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R325	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R326	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R327	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R328	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R329	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R330	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R331	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R332	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R333	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R334	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R335	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R336	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R337	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R338	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R339	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R340	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R341	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R342	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R343	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R344	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R345	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R346	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R347	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R348	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R349	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R350	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R351	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R352	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R353	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R354	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R355	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R356	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R357	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R358	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R359	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R360	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R361	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R362	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R363	1-216-023-00	METAL GLAZE	82	5%	1/10W	
R364	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R365	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R366	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R367	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R368	1-216-047-91	METAL GLAZE	820	5%	1/10W	
R369	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R370	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R371	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R372	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R373	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R374	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R375	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R376	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R377	1-216-083-00	METAL GLAZE 27K 5% 1/10W	
R378	1-216-091-00	METAL GLAZE 56K 5% 1/10W	
R379	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R380	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R381	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R382	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R383	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R384	1-216-043-91	METAL GLAZE 560 5% 1/10W	
R385	1-208-812-11	METAL CHIP 18K 0.50% 1/10W	
R386	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R387	1-216-635-11	METAL CHIP 220 0.50% 1/10W	
R388	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R389	1-216-635-11	METAL CHIP 220 0.50% 1/10W	
R390	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R391	1-216-043-91	METAL GLAZE 560 5% 1/10W	
R392	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R393	1-216-013-00	METAL GLAZE 33 5% 1/10W	
R394	1-216-013-00	METAL GLAZE 33 5% 1/10W	
R395	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R396	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R397	1-216-047-91	METAL GLAZE 820 5% 1/10W	
R398	1-216-013-00	METAL GLAZE 33 5% 1/10W	
R399	1-216-013-00	METAL GLAZE 33 5% 1/10W	
R410	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R411	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R412	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R415	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R416	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
R417	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
R418	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R419	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	

<VARIABLE RESISTOR>

RV101	1-241-759-21	RES, ADJ, CERMET 220	
RV102	1-241-763-11	RES, ADJ, CERMET 4.7K	
RV103	1-241-767-21	RES, ADJ, CERMET 100K	
RV104	1-241-767-21	RES, ADJ, CERMET 100K	
RV105	1-241-763-11	RES, ADJ, CERMET 4.7K	

<SWITCH>

SW-1 1-570-859-11 SWITCH, SLIDE

<THERMISTER>

TH101 1-800-071-XX THERMISTER

<CRYSTAL>

X101	1-567-307-11	OSCILLATOR, CRYSTAL	
X102	1-567-131-00	OSCILLATOR, CRYSTAL	

****

*A-1135-822-A BB BOARD, COMPLETE (VPH-1292Q/QM)
****

*A-1135-841-A BB BOARD, COMPLETE (VPH-1292QMG)
****

<CONNECTOR>

BB-2 1-564-595-11 PLUG, CONNECTOR 14P

REF.NO.	PART NO.	DESCRIPTION	REMARK
BB-1	*1-568-984-11	CONNECTOR, MALE 96P	

<CAPACITOR>

C402	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C404	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C405	1-126-933-11	ELECT 100MF 20% 16V	
C406	1-126-934-11	ELECT 220MF 20% 16V	
C407	1-126-933-11	ELECT 100MF 20% 16V	
C408	1-126-964-11	ELECT 10MF 20% 50V	
C409	1-126-933-11	ELECT 100MF 20% 16V	
C412	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C413	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C414	1-126-964-11	ELECT 10MF 20% 50V	
C415	1-126-933-11	ELECT 100MF 20% 16V	
C416	1-126-933-11	ELECT 100MF 20% 16V	
C417	1-126-934-11	ELECT 220MF 20% 16V	
C418	1-126-933-11	ELECT 100MF 20% 16V	
C419	1-126-933-11	ELECT 100MF 20% 16V	
C425	1-126-933-11	ELECT 100MF 20% 16V	
C440	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C450	1-163-113-00	CERAMIC CHIP 68PF 5% 50V	
C453	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C501	1-126-964-11	ELECT 10MF 20% 50V	
C502	1-126-964-11	ELECT 10MF 20% 50V	
C503	1-126-967-11	ELECT 47MF 20% 16V	
C504	1-126-967-11	ELECT 47MF 20% 16V	
C506	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C507	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C508	1-126-967-11	ELECT 47MF 20% 16V	
C509	1-163-239-11	CERAMIC CHIP 33PF 5% 50V	
C510	1-126-967-11	ELECT 47MF 20% 16V	
C511	1-126-935-11	ELECT 470MF 20% 16V	
C512	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C513	1-126-967-11	ELECT 47MF 20% 16V	
C520	1-124-903-11	ELECT 1MF 20% 50V	
C521	1-126-964-11	ELECT 10MF 20% 50V	
C522	1-126-964-11	ELECT 10MF 20% 50V	
C524	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C525	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C526	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C650	1-107-714-11	ELECT 10MF 20% 50V	
C651	1-136-169-00	FILM 0.22MF 5% 50V	
C652	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C653	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C654	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C655	1-126-967-11	ELECT 47MF 20% 50V	
C657	1-126-935-11	ELECT 470MF 20% 16V	
C658	1-124-122-11	ELECT 100MF 20% 50V	
C660	1-126-964-11	ELECT 10MF 20% 50V	
C692	1-124-122-11	ELECT 100MF 20% 50V	
C693	1-124-122-11	ELECT 100MF 20% 50V	
C694	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C695	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C696	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C697	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C700	1-107-714-11	ELECT 10MF 20% 50V	
C701	1-136-169-00	FILM 0.22MF 5% 50V	
C702	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C703	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C704	1-163-099-00	CERAMIC CHIP 18PF 5% 50V	
C707	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C708	1-126-967-11	ELECT 47MF 20% 50V	
C710	1-124-122-11	ELECT 100MF 20% 50V	

BB

REF.NO.	PART NO.	DESCRIPTION	REMARK
C711	1-126-935-11	ELECT 470MF 20% 16V	
C713	1-126-964-11	ELECT 10MF 20% 50V	
C750	1-107-714-11	ELECT 10MF 20% 50V	
C751	1-136-169-00	FILM 0.22MF 5% 50V	
C752	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C753	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C754	1-126-933-11	ELECT 100MF 20% 16V	
C755	1-126-933-11	ELECT 100MF 20% 16V	
C756	1-126-933-11	ELECT 100MF 20% 16V	
C757	1-126-967-11	ELECT 47MF 20% 50V	
C759	1-124-122-11	ELECT 100MF 20% 50V	
C760	1-126-935-11	ELECT 470MF 20% 16V	
C762	1-128-551-11	ELECT 22MF 20% 50V	
C763	1-126-964-11	ELECT 10MF 20% 50V	
C914	1-126-933-11	ELECT 100MF 20% 16V	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN90	1-564-506-11	PLUG, CONNECTOR 3P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D401	8-719-900-95	DIODE V09G	
D402	8-719-900-95	DIODE V09G	
D440	8-719-801-78	DIODE 1SS184	
D450	8-719-801-78	DIODE 1SS184	
D501	8-719-801-78	DIODE 1SS184	
D502	8-719-801-78	DIODE 1SS184	
D503	8-719-106-80	DIODE RD13M-B2	
D505	8-719-801-78	DIODE 1SS184	
D506	8-719-105-82	DIODE RD5.1M-B2	
D507	8-719-105-82	DIODE RD5.1M-B2	
D508	8-719-105-82	DIODE RD5.1M-B2	
D509	8-719-105-82	DIODE RD5.1M-B2	
D510	8-719-105-82	DIODE RD5.1M-B2	
D511	8-719-105-82	DIODE RD5.1M-B2	
D512	8-719-105-82	DIODE RD5.1M-B2	
D513	8-719-105-82	DIODE RD5.1M-B2	
D514	8-719-105-82	DIODE RD5.1M-B2	
D516	8-719-106-80	DIODE RD13M-B2	
D518	8-719-106-80	DIODE RD13M-B2	
D520	8-719-105-82	DIODE RD5.1M-B2	
D521	8-719-105-82	DIODE RD5.1M-B2	
D522	8-719-106-80	DIODE RD13M-B2	
D523	8-719-106-80	DIODE RD13M-B2	
D524	8-719-105-82	DIODE RD5.1M-B2	
D525	8-719-105-28	DIODE RD2.4M-B	
D526	8-719-801-78	DIODE 1SS184	
D527	8-719-105-82	DIODE RD5.1M-B2	
D528	8-719-801-78	DIODE 1SS184	
D529	8-719-105-46	DIODE RD3.3M-B2	
D531	8-719-105-82	DIODE RD5.1M-B2	
D532	8-719-105-82	DIODE RD5.1M-B2	
D533	8-719-105-82	DIODE RD5.1M-B2	
D534	8-719-105-82	DIODE RD5.1M-B2	
D634	8-719-801-78	DIODE 1SS184	
D652	8-719-801-78	DIODE 1SS184	
D653	8-719-801-78	DIODE 1SS184	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC401	8-759-800-81	IC LA7016	
IC402	8-759-701-79	IC NJM7812FA	
IC403	8-759-929-65	IC LM7912CT	
IC404	8-759-300-71	IC HD14053BFP	
IC405	8-759-926-18	IC SN74HC157ANS	
IC407	8-759-926-18	IC SN74HC157ANS	
IC408	8-759-300-71	IC HD14053BFP	
IC409	8-759-300-71	IC HD14053BFP	
IC410	8-759-100-96	IC UPC4558G2	
IC411	8-759-100-96	IC UPC4558G2	
IC413	8-749-922-84	IC BX-6474	
IC414	8-749-922-83	IC BX-6473	
IC415	8-749-922-83	IC BX-6473	
IC416	8-749-922-83	IC BX-6473	
IC417	8-749-010-54	IC BX7913A	
IC418	8-749-010-58	IC BX6589	
IC419	8-749-010-58	IC BX6589	
IC420	8-749-010-58	IC BX6589	
IC422	8-759-100-93	IC UPC393G2	
IC423	8-759-925-85	IC SN74HC32ANS	
IC424	8-759-100-93	IC UPC393G2	

<JACK>

REF.NO.	PART NO.	DESCRIPTION	REMARK
J101	1-566-980-21	CONNECTOR, ROUND TYPE 4P (VPH-1292Q/QM)	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L401	1-459-155-00	COIL (WITH CORE) 45UH	
L402	1-459-155-00	COIL (WITH CORE) 45UH	
L403	1-459-155-00	COIL (WITH CORE) 45UH	
L404	1-459-155-00	COIL (WITH CORE) 45UH	
L405	1-410-671-31	INDUCTOR 47UH	
L605	1-410-482-31	INDUCTOR 100UH	
L651	1-410-482-31	INDUCTOR 100UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q401	8-729-140-96	TRANSISTOR 2SD774-34	
Q402	8-729-140-97	TRANSISTOR 2SB734-34	
Q403	8-729-901-01	TRANSISTOR DTC144EK	
Q404	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q405	8-729-901-01	TRANSISTOR DTC144EK	
Q440	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q450	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q451	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q452	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q453	8-729-901-01	TRANSISTOR DTC144EK	
Q454	8-729-901-01	TRANSISTOR DTC144EK	
Q456	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q457	8-729-216-22	TRANSISTOR 2SA1162-G	
Q458	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q459	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q460	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q501	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q502	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q503	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q504	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q506	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q507	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q508	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q509	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q510	8-729-901-01	TRANSISTOR DTC144EK	
Q511	8-729-901-01	TRANSISTOR DTC144EK	
Q512	8-729-901-01	TRANSISTOR DTC144EK	
Q513	8-729-901-01	TRANSISTOR DTC144EK	

BB

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q514	8-729-901-01	TRANSISTOR DTC144EK	
Q515	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q516	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q517	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q520	8-729-901-01	TRANSISTOR DTC144EK	
Q521	8-729-901-01	TRANSISTOR DTC144EK	
Q522	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q523	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q524	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q528	8-729-901-01	TRANSISTOR DTC144EK	
Q529	8-729-901-01	TRANSISTOR DTC144EK	
Q530	8-729-901-01	TRANSISTOR DTC144EK	
Q531	8-729-901-01	TRANSISTOR DTC144EK	
Q534	8-729-320-62	TRANSISTOR 2SD789-34	
Q535	8-729-901-01	TRANSISTOR DTC144EK	
Q536	8-729-901-01	TRANSISTOR DTC144EK	
Q537	8-729-901-01	TRANSISTOR DTC144EK	
Q538	8-729-901-01	TRANSISTOR DTC144EK	
Q539	8-729-901-01	TRANSISTOR DTC144EK	
Q540	8-729-901-01	TRANSISTOR DTC144EK	
Q541	8-729-901-01	TRANSISTOR DTC144EK	
Q542	8-729-901-01	TRANSISTOR DTC144EK	
Q543	8-729-901-01	TRANSISTOR DTC144EK	
Q544	8-729-901-01	TRANSISTOR DTC144EK	
Q546	8-729-901-01	TRANSISTOR DTC144EK	
Q547	8-729-216-22	TRANSISTOR 2SA1162-G	
Q548	8-729-901-01	TRANSISTOR DTC144EK	
Q549	8-729-901-01	TRANSISTOR DTC144EK	
Q550	8-729-901-01	TRANSISTOR DTC144EK	
Q551	8-729-901-01	TRANSISTOR DTC144EK	
Q552	8-729-901-01	TRANSISTOR DTC144EK	
Q650	8-729-116-05	TRANSISTOR 2SK160-K5	
Q651	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q652	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q653	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q654	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q656	8-729-901-01	TRANSISTOR DTC144EK	
Q700	8-729-116-05	TRANSISTOR 2SK160-K5	
Q701	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q702	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q703	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q704	8-729-923-06	TRANSISTOR FMW-8	
Q705	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q706	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q707	8-729-923-06	TRANSISTOR FMW-8	
Q708	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q709	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q710	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q741	8-729-901-01	TRANSISTOR DTC144EK	
Q750	8-729-116-05	TRANSISTOR 2SK160-K5	
Q751	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q752	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q753	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q754	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q755	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q756	8-729-901-01	TRANSISTOR DTC144EK	
Q757	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q800	8-729-230-49	TRANSISTOR 2SC2712-YG	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R401	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R403	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R404	1-208-824-11	METAL CHIP	56K	0.50%	1/10W	
R405	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R440	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R441	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R450	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R451	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R452	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R453	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R454	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R455	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R456	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R459	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R460	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R461	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R462	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R463	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R464	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R466	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R467	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R468	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R469	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R470	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R471	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R472	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R473	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R474	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R501	1-216-624-11	METAL CHIP	75	0.50%	1/10W	
R502	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R503	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R504	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R505	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R506	1-216-624-11	METAL CHIP	75	0.50%	1/10W	
R507	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R508	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R509	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R510	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R511	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R512	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R513	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R514	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R516	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R519	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R521	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R522	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R523	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R524	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R525	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R526	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R527	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R528	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R529	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R530	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R531	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R532	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R533	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R534	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R535	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R536	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R537	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R538	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R539	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R540	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R541	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R542	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	

BB

REF.NO.	PART NO.	DESCRIPTION				REMARK
R543	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R544	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R545	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R546	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R547	1-216-631-11	METAL CHIP	150	0.50%	1/10W	
R548	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R549	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R550	1-216-047-91	METAL GLAZE	820	5%	1/10W	
R551	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R552	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R553	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R554	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R555	1-216-047-91	METAL GLAZE	820	5%	1/10W	
R556	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R557	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R558	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R559	1-216-631-11	METAL CHIP	150	0.50%	1/10W	
R560	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R561	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R562	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R563	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R564	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R565	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R566	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R567	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R568	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R569	1-216-295-91	CONDUCTOR, CHIP				
R570	1-216-624-11	METAL CHIP	75	0.50%	1/10W	
R571	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R572	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R573	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R574	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R575	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R576	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R577	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R581	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R584	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R590	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R594	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R595	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R596	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R597	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R598	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R599	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R601	1-216-631-11	METAL CHIP	150	0.50%	1/10W	
R602	1-216-631-11	METAL CHIP	150	0.50%	1/10W	
R608	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R609	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R610	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R611	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R612	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R613	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R614	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R615	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R616	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R617	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R618	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R619	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R620	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R621	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R622	1-216-448-11	METAL OXIDE	39	5%	2W	F
R623	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R624	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R625	1-216-073-00	METAL GLAZE	10K	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R626	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R627	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R628	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R629	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R630	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R633	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R634	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R635	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R636	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R637	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R638	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R641	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R642	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R643	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R644	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R645	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R646	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R647	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R648	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R649	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R650	1-216-624-11	METAL CHIP	75	0.50%	1/10W	
R651	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R652	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R653	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R654	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R655	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R656	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R657	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R658	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R659	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R660	1-216-624-11	METAL CHIP	75	0.50%	1/10W	
R661	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R663	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R664	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R665	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R666	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R667	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R668	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R686	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R700	1-216-624-11	METAL CHIP	75	0.50%	1/10W	
R701	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R702	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R703	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R704	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R705	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R706	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R707	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R708	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R709	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R710	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R711	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R712	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R713	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R714	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R715	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R716	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R717	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R718	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R719	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R720	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R721	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R722	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R723	1-216-025-91	METAL GLAZE	100	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R724	1-216-624-11	METAL CHIP 75 0.50% 1/10W	
R725	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R727	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R728	1-216-017-91	METAL GLAZE 47 5% 1/10W	
R729	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R750	1-216-624-11	METAL CHIP 75 0.50% 1/10W	
R751	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R752	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R753	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R755	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R756	1-216-121-91	METAL GLAZE 1M 5% 1/10W	
R757	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R758	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R759	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R760	1-216-665-11	METAL CHIP 3.9K 0.50% 1/10W	
R761	1-208-774-11	METAL CHIP 470 0.50% 1/10W	
R762	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
R763	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R764	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R765	1-216-624-11	METAL CHIP 75 0.50% 1/10W	
R766	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R768	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R769	1-216-017-91	METAL GLAZE 47 5% 1/10W	
R770	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R791	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R836	1-216-631-11	METAL CHIP 150 0.50% 1/10W	
R837	1-216-631-11	METAL CHIP 150 0.50% 1/10W	
R900	1-216-049-91	METAL GLAZE 1K 5% 1/10W	

<RELAY>

REF.NO.	PART NO.	DESCRIPTION	REMARK
RL401	1-515-757-11	RELAY	
RL402	1-515-757-11	RELAY	
RL403	1-515-757-11	RELAY	

<TERMINAL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
TB102	1-537-257-21	TERMINAL BOARD, INPUT/OUTPUT	(VPH-1292Q/QM)
TB501	1-537-956-11	TERMINAL BOARD ASSY, I/O	

****

*A-1190-195-A PB BOARD, COMPLETE
****

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN241	*1-564-506-11	PLUG, CONNECTOR 3P	

<TRANSFORMER>

REF.NO.	PART NO.	DESCRIPTION	REMARK
FBT210	⚠1-453-160-12	TRANSFORMER ASSY, FLYBACK (NX-3031)	
FBT211	⚠1-453-160-12	TRANSFORMER ASSY, FLYBACK (NX-3031)	

<NEON LAMP>

REF.NO.	PART NO.	DESCRIPTION	REMARK
NL210	1-519-108-XX	LAMP, NEON	
NL211	1-519-108-XX	LAMP, NEON	

****

*A-1190-196-A PC BOARD, COMPLETE
****

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q201	8-729-820-71	TRANSISTOR 2SC3998CA	

****

*A-1195-096-A PA BOARD, COMPLETE
****

4-382-854-11 SCREW (M3X10), P, SW (+)

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
C1	1-124-903-11	ELECT 1MF 20% 50V	
C2	1-124-903-11	ELECT 1MF 20% 50V	
C3	1-124-927-11	ELECT 4.7MF 20% 50V	
C4	1-124-927-11	ELECT 4.7MF 20% 50V	
C5	1-124-927-11	ELECT 4.7MF 20% 50V	
C6	1-124-927-11	ELECT 4.7MF 20% 50V	
C7	1-126-964-11	ELECT 10MF 20% 50V	
C8	1-130-471-00	FILM 0.001MF 5% 50V	
C9	1-126-966-11	ELECT 33MF 20% 16V	
C10	1-124-925-11	ELECT 2.2MF 20% 50V	
C11	1-136-165-00	FILM 0.1MF 5% 50V	
C12	1-126-964-11	ELECT 10MF 20% 50V	
C13	1-136-169-00	FILM 0.22MF 5% 50V	
C14	1-126-964-11	ELECT 10MF 20% 50V	
C15	1-126-940-11	ELECT 330MF 20% 16V	
C16	1-102-973-00	CERAMIC 100PF 5% 50V	
C17	1-136-165-00	FILM 0.1MF 5% 50V	
C18	1-136-165-00	FILM 0.1MF 5% 50V	
C19	1-136-165-00	FILM 0.1MF 5% 50V	
C20	1-136-165-00	FILM 0.1MF 5% 50V	
C21	1-101-004-00	CERAMIC 0.01MF 50V	
C22	1-102-973-00	CERAMIC 100PF 5% 50V	
C23	1-126-964-11	ELECT 10MF 20% 50V	
C24	1-126-964-11	ELECT 10MF 20% 50V	
C25	1-136-169-00	FILM 0.22MF 5% 50V	
C26	1-102-978-00	CERAMIC 220PF 5% 50V	
C27	1-126-964-11	ELECT 10MF 20% 50V	
C28	1-124-122-11	ELECT 100MF 20% 50V	
C29	1-126-964-11	ELECT 10MF 20% 50V	
C30	1-101-004-00	CERAMIC 0.01MF 50V	
C31	1-101-004-00	CERAMIC 0.01MF 50V	
C32	1-102-973-00	CERAMIC 100PF 5% 50V	
C33	1-102-973-00	CERAMIC 100PF 5% 50V	
C34	1-102-973-00	CERAMIC 100PF 5% 50V	
C35	1-126-940-11	ELECT 330MF 20% 16V	
C36	1-137-364-11	FILM 0.001MF 5% 50V	
C37	1-107-370-11	FILM 0.1MF 10% 200V	
C38	1-124-903-11	ELECT 1MF 20% 50V	
C39	1-124-903-11	ELECT 1MF 20% 50V	
C40	1-137-366-11	FILM 0.0022MF 5% 50V	
C41	1-126-600-11	ELECT 100MF 20% 160V	
C42	⚠1-136-722-11	FILM 0.008MF 3% 1.6KV	
C43	1-129-718-00	FILM 0.022MF 10% 630V	
C44	1-126-157-11	ELECT 10MF 20% 16V	
C45	1-137-364-11	FILM 0.001MF 5% 50V	
C46	1-126-933-11	ELECT 100MF 20% 16V	
C47	1-124-903-11	ELECT 1MF 20% 50V	
C48	1-102-973-00	CERAMIC 100PF 5% 50V	
C49	1-136-561-11	FILM 0.0068MF 10% 630V	
C50	1-137-364-11	FILM 0.001MF 5% 50V	
C51	1-126-600-11	ELECT 100MF 20% 160V	
C52	1-126-600-11	ELECT 100MF 20% 160V	

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

PA

REF.NO.	PART NO.	DESCRIPTION			REMARK
C53	1-102-030-00	CERAMIC	330PF	10%	500V
C54	⚠1-136-729-11	FILM	1.5MF	5%	400V
C55	1-124-903-11	ELECT	1MF	20%	50V
C56	1-107-364-11	FILM	0.01MF	10%	200V
C57	1-107-370-11	FILM	0.1MF	10%	200V
C58	1-126-967-11	ELECT	47MF	20%	16V
C59	1-136-165-00	FILM	0.1MF	5%	50V
C60	1-101-004-00	CERAMIC	0.01MF		50V
C61	1-101-004-00	CERAMIC	0.01MF		50V
C62	1-136-165-00	FILM	0.1MF	5%	50V
C63	1-136-165-00	FILM	0.1MF	5%	50V
C67	1-101-004-00	CERAMIC	0.01MF		50V
C68	1-101-004-00	CERAMIC	0.01MF		50V
C70	1-101-004-00	CERAMIC	0.01MF		50V
C71	1-102-973-00	CERAMIC	100PF	5%	50V
C72	1-102-973-00	CERAMIC	100PF	5%	50V
C73	1-126-933-11	ELECT	100MF	20%	16V
C74	1-104-665-11	ELECT	100MF	20%	25V
C75	1-126-943-11	ELECT	2200MF	20%	25V
C78	1-126-963-11	ELECT	4.7MF	20%	50V
		<CONNECTOR>			
CN281	*1-564-518-11	PLUG, CONNECTOR 3P			
CN282	*1-564-520-11	PLUG, CONNECTOR 5P			
CN283	*1-564-526-11	PLUG, CONNECTOR 11P			
CN284	*1-564-528-11	PLUG, CONNECTOR 13P			
CN285	1-564-523-11	PLUG, CONNECTOR 8P			
CN286	*1-506-348-XX	PIN, CONNECTOR 6P			
CN287	*1-564-521-11	PLUG, CONNECTOR 6P			
CN288	*1-564-518-11	PLUG, CONNECTOR 3P			
CN289	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P			
CN290	1-506-348-XX	PIN, CONNECTOR 4P			
CN291	*1-564-520-11	PLUG, CONNECTOR 5P			
		<DIODE>			
D1	8-719-911-19	DIODE 1SS119-25			
D2	8-719-911-19	DIODE 1SS119-25			
D3	8-719-911-19	DIODE 1SS119-25			
D4	8-719-911-19	DIODE 1SS119-25			
D5	8-719-109-85	DIODE RD5.1ESB2			
D6	8-719-911-19	DIODE 1SS119-25			
D8	8-719-110-36	DIODE RD13ESB2			
D9	8-719-911-19	DIODE 1SS119-25			
D10	8-719-109-85	DIODE RD5.1ESB2			
D11	8-719-109-66	DIODE RD3.3ESB2			
D12	8-719-109-85	DIODE RD5.1ESB2			
D13	8-719-911-19	DIODE 1SS119-25			
D14	8-719-911-19	DIODE 1SS119-25			
D15	8-719-911-19	DIODE 1SS119-25			
D16	8-719-110-36	DIODE RD13ESB2			
D17	8-719-945-81	DIODE ERC06-15SA			
D18	8-719-911-19	DIODE 1SS119-25			
D19	8-719-945-81	DIODE ERC06-15SA			
D20	8-719-911-19	DIODE 1SS119-25			
D21	8-719-911-19	DIODE 1SS119-25			
D22	8-719-110-36	DIODE RD13ESB2			
D23	8-719-920-67	DIODE ERC91-02			
D24	8-719-911-19	DIODE 1SS119-25			
D25	8-719-911-19	DIODE 1SS119-25			
D26	8-719-920-67	DIODE ERC91-02			
D27	8-719-911-19	DIODE 1SS119-25			
D28	8-719-911-19	DIODE 1SS119-25			
D29	8-719-911-19	DIODE 1SS119-25			

REF.NO.	PART NO.	DESCRIPTION	REMARK
D30	8-719-110-78	DIODE RD33ESB2	
D31	8-719-911-19	DIODE 1SS119-25	
D32	8-719-900-95	DIODE V09G	
D33	8-719-911-19	DIODE 1SS119-25	
D34	8-719-920-67	DIODE ERC91-02	
D35	8-719-911-19	DIODE 1SS119-25	
D36	8-719-110-36	DIODE RD13ESB2	
D37	8-719-911-19	DIODE 1SS119-25	
D38	8-719-920-67	DIODE ERC91-02	
D39	8-719-911-19	DIODE 1SS119-25	
D40	8-719-911-19	DIODE 1SS119-25	
D41	8-719-911-19	DIODE 1SS119-25	
D42	8-719-109-85	DIODE RD5.1ESB2	
		<FERRITE BEAD>	
FB1	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB2	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB3	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
		<IC>	
IC1	8-759-503-91	IC TL082ACP	
IC2	8-759-103-93	IC UPC393C	
IC3	8-759-103-93	IC UPC393C	
IC4	8-759-103-93	IC UPC393C	
IC5	8-759-701-79	IC NJM7812FA	
IC6	8-759-929-65	IC LM7912CT	
IC7	8-759-240-40	IC TC4040BP	
IC8	8-759-045-72	IC MC14572UBCP	
IC9	8-759-140-11	IC UPD4011BC	
IC10	8-759-040-01	IC MC14001BCP	
IC11	8-759-503-91	IC TL082ACP	
IC12	8-759-103-93	IC UPC393C	
IC13	8-759-908-15	IC TL431CLP	
IC14	8-759-145-58	IC UPC4558C	
		<COIL>	
L1	⚠1-409-543-11	COIL, CHOKE 420UH	
L2	⚠1-409-543-11	COIL, CHOKE 420UH	
L3	1-459-614-11	COIL, CHOKE 90UH	
L4	1-459-614-11	COIL, CHOKE 90UH	
L5	1-459-155-00	COIL (WITH CORE) 45UH	
L6	1-459-155-00	COIL (WITH CORE) 45UH	
L7	1-412-521-31	INDUCTOR 4.7UH	
L8	1-412-521-31	INDUCTOR 4.7UH	
		<TRANSISTOR>	
Q1	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q2	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q3	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q4	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q5	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q6	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q7	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q8	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q9	8-729-140-96	TRANSISTOR 2SD774-34	
Q10	8-729-140-97	TRANSISTOR 2SB734-34	
Q11	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q14	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q15	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q16	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q17	8-729-119-78	TRANSISTOR 2SC2785-HFE	

PA

REF.NO.	PART NO.	DESCRIPTION				REMARK
Q18	8-729-423-19	TRANSISTOR UN421D				
Q19	8-729-024-38	TRANSISTOR IRFIP250				
Q20	8-729-143-42	TRANSISTOR 2SK929				
Q21	8-729-207-89	TRANSISTOR 2SA1358-Y				
Q22	8-729-119-80	TRANSISTOR 2SC2688-LK				

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1	1-215-470-00	METAL	110K	1%	1/4W	
R2	1-247-863-91	CARBON	22K	5%	1/4W	
R3	1-249-439-11	CARBON	68K	5%	1/4W	
R4	1-215-470-00	METAL	110K	1%	1/4W	
R5	1-247-863-91	CARBON	22K	5%	1/4W	
R6	1-249-439-11	CARBON	68K	5%	1/4W	
R7	1-247-863-91	CARBON	22K	5%	1/4W	
R8	1-247-863-91	CARBON	22K	5%	1/4W	
R9	1-249-423-11	CARBON	3.3K	5%	1/4W	
R10	1-249-429-11	CARBON	10K	5%	1/4W	
R12	1-249-429-11	CARBON	10K	5%	1/4W	
R13	1-249-429-11	CARBON	10K	5%	1/4W	
R14	1-249-429-11	CARBON	10K	5%	1/4W	
R15	1-247-863-91	CARBON	22K	5%	1/4W	
R16	1-249-425-11	CARBON	4.7K	5%	1/4W	
R17	1-247-807-31	CARBON	100	5%	1/4W	
R18	1-249-429-11	CARBON	10K	5%	1/4W	
R19	1-249-429-11	CARBON	10K	5%	1/4W	
R20	1-247-863-91	CARBON	22K	5%	1/4W	
R21	1-249-441-11	CARBON	100K	5%	1/4W	
R22	1-215-463-00	METAL	56K	1%	1/4W	
R23	1-215-455-00	METAL	27K	1%	1/4W	
R24	1-249-429-11	CARBON	10K	5%	1/4W	
R25	1-249-436-11	CARBON	39K	5%	1/4W	
R26	1-249-417-11	CARBON	1K	5%	1/4W	
R27	1-249-429-11	CARBON	10K	5%	1/4W	
R28	1-215-423-00	METAL	1.2K	1%	1/4W	
R29	1-215-429-00	METAL	2.2K	1%	1/4W	
R30	1-215-455-00	METAL	27K	1%	1/4W	
R31	1-249-436-11	CARBON	39K	5%	1/4W	
R32	1-215-473-00	METAL	150K	1%	1/4W	
R33	1-249-439-11	CARBON	68K	5%	1/4W	
R34	1-249-436-11	CARBON	39K	5%	1/4W	
R35	1-249-417-11	CARBON	1K	5%	1/4W	
R36	1-249-423-11	CARBON	3.3K	5%	1/4W	
R37	1-249-429-11	CARBON	10K	5%	1/4W	
R38	1-249-429-11	CARBON	10K	5%	1/4W	
R39	1-249-429-11	CARBON	10K	5%	1/4W	
R40	1-249-436-11	CARBON	39K	5%	1/4W	
R41	1-249-431-11	CARBON	15K	5%	1/4W	
R42	1-249-417-11	CARBON	1K	5%	1/4W	
R43	1-215-461-00	METAL	47K	1%	1/4W	
R45	1-215-431-00	METAL	2.7K	1%	1/4W	
R46	1-215-431-00	METAL	2.7K	1%	1/4W	
R48	1-249-417-11	CARBON	1K	5%	1/4W	
R49	1-249-417-11	CARBON	1K	5%	1/4W	
R50	1-249-429-11	CARBON	10K	5%	1/4W	
R51	1-249-423-11	CARBON	3.3K	5%	1/4W	
R52	1-249-423-11	CARBON	3.3K	5%	1/4W	
R53	1-249-417-11	CARBON	1K	5%	1/4W	
R54	1-249-417-11	CARBON	1K	5%	1/4W	
R55	1-249-423-11	CARBON	3.3K	5%	1/4W	
R56	1-247-895-91	CARBON	470K	5%	1/4W	
R57	1-249-417-11	CARBON	1K	5%	1/4W	
R58	1-249-437-11	CARBON	47K	5%	1/4W	
R59	1-247-903-00	CARBON	1M	5%	1/4W	
R61	1-249-417-11	CARBON	1K	5%	1/4W	
R62	1-247-807-31	CARBON	100	5%	1/4W	
R63	1-249-411-11	CARBON	330	5%	1/4W	
R64	1-215-456-00	METAL	30K	1%	1/4W	
R65	1-215-445-00	METAL	10K	1%	1/4W	
R66	1-215-445-00	METAL	10K	1%	1/4W	
R67	1-247-903-00	CARBON	1M	5%	1/4W	
R68	1-249-417-11	CARBON	1K	5%	1/4W	
R69	1-215-455-00	METAL	27K	1%	1/4W	
R71	1-249-429-11	CARBON	10K	5%	1/4W	
R72	1-247-807-31	CARBON	100	5%	1/4W	
R73	1-249-423-11	CARBON	3.3K	5%	1/4W	
R74	1-249-417-11	CARBON	1K	5%	1/4W	
R75	1-247-807-31	CARBON	100	5%	1/4W	
R76	1-247-807-31	CARBON	100	5%	1/4W	
R77	1-249-937-11	CARBON	3.9K	5%	1/4W	F
R78	1-249-431-11	CARBON	15K	5%	1/4W	
R79	1-249-431-11	CARBON	15K	5%	1/4W	
R80	1-249-417-11	CARBON	1K	5%	1/4W	
R81	1-249-441-11	CARBON	100K	5%	1/4W	
R82	1-249-441-11	CARBON	100K	5%	1/4W	
R83	1-249-422-11	CARBON	2.7K	5%	1/4W	
R84	1-249-431-11	CARBON	15K	5%	1/4W	
R85	1-215-892-11	METAL OXIDE	1K	5%	2W	F
R86	1-215-921-11	METAL OXIDE	4.7K	5%	3W	F
R87	1-215-892-11	METAL OXIDE	1K	5%	2W	F
R88	1-249-441-11	CARBON	100K	5%	1/4W	
R89	1-215-905-11	METAL OXIDE	10	5%	3W	F
R90	1-215-895-11	METAL OXIDE	3.3K	5%	2W	F
R91	1-215-895-11	METAL OXIDE	3.3K	5%	2W	F
R92	1-215-870-11	METAL OXIDE	1.5K	5%	1W	F
R93	1-215-895-11	METAL OXIDE	3.3K	5%	2W	F
R94	1-215-863-11	METAL OXIDE	100	5%	1W	F
R95	1-215-461-00	METAL	47K	1%	1/4W	
R96	1-249-437-11	CARBON	47K	5%	1/4W	
R97	1-247-863-91	CARBON	22K	5%	1/4W	
R98	1-215-863-11	METAL OXIDE	100	5%	1W	F
R99	1-247-725-11	CARBON	10K	5%	1/4W	F
R100	1-249-417-11	CARBON	1K	5%	1/4W	
R101	1-247-807-31	CARBON	100	5%	1/4W	
R102	1-249-441-11	CARBON	100K	5%	1/4W	
R103	1-249-417-11	CARBON	1K	5%	1/4W	
R104	1-249-441-11	CARBON	100K	5%	1/4W	
R105	1-249-429-11	CARBON	10K	5%	1/4W	
R106	1-249-425-11	CARBON	4.7K	5%	1/4W	
R107	1-247-863-91	CARBON	22K	5%	1/4W	
R108	1-249-441-11	CARBON	100K	5%	1/4W	
R109	1-249-437-11	CARBON	47K	5%	1/4W	
R110	1-249-441-11	CARBON	100K	5%	1/4W	
R111	1-249-437-11	CARBON	47K	5%	1/4W	
R112	1-215-421-00	METAL	1K	1%	1/4W	
R113	1-215-421-00	METAL	1K	1%	1/4W	
R114	1-215-457-00	METAL	33K	1%	1/4W	
R115	1-215-421-00	METAL	1K	1%	1/4W	
R119	1-249-423-11	CARBON	3.3K	5%	1/4W	
R120	1-215-453-00	METAL	22K	1%	1/4W	
R121	1-215-475-00	METAL	180K	1%	1/4W	
R122	1-215-475-00	METAL	180K	1%	1/4W	
R123	1-249-417-11	CARBON	1K	5%	1/4W	
R124	1-249-425-11	CARBON	4.7K	5%	1/4W	
R125	1-247-807-31	CARBON	100	5%	1/4W	
R126	1-249-429-11	CARBON	10K	5%	1/4W	
R127	1-247-807-31	CARBON	100	5%	1/4W	
R128	1-247-807-31	CARBON	100	5%	1/4W	

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R132	1-249-430-11	CARBON	12K	5%	1/4W	
R133	1-215-905-11	METAL OXIDE	10	5%	3W	F
R134	1-215-905-11	METAL OXIDE	10	5%	3W	F
R135	1-215-905-11	METAL OXIDE	10	5%	3W	F
R137	1-249-401-11	CARBON	47	5%	1/4W	F
R138	1-249-417-11	CARBON	1K	5%	1/4W	
R139	1-247-807-31	CARBON	100	5%	1/4W	
R140	1-247-807-31	CARBON	100	5%	1/4W	
R141	1-247-807-31	CARBON	100	5%	1/4W	
R143	1-215-431-00	METAL	2.7K	1%	1/4W	
R144	1-215-431-00	METAL	2.7K	1%	1/4W	
R145	1-249-426-11	CARBON	5.6K	5%	1/4W	
R146	1-249-428-11	CARBON	8.2K	5%	1/4W	

<VARIABLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION
⊠RV1	⚠1-241-631-21	RES, ADJ, CARBON 22K
	*3-738-015-01	COVER, (DIA. 6) CARBON VR; RV1
⊠RV2	⚠1-241-632-11	RES, ADJ, CARBON 47K
	*3-738-015-01	COVER, (DIA. 6) CARBON VR; RV2
RV3	1-237-515-21	RES, ADJ, CERMET 1K

<TRANSFORMER>

REF.NO.	PART NO.	DESCRIPTION
T1	1-437-144-11	TRANSFORMER, FERRITE (HDT)

<CRYSTAL>

REF.NO.	PART NO.	DESCRIPTION
X1	1-578-768-11	VIBLATOR, CERAMIC

****

*A-1270-304-A QM BOARD, COMPLETE
****

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION
CN70	*1-564-508-11	PLUG, CONNECTOR 5P
CN71	*1-564-509-11	PLUG, CONNECTOR 6P
CN72	*1-564-515-11	PLUG, CONNECTOR 12P
CN73	*1-568-985-11	CONNECTOR, FEMALE 64P

<JACK>

REF.NO.	PART NO.	DESCRIPTION
J7	*1-526-575-00	SOCKET, PLUG 1P
J8	*1-526-575-00	SOCKET, PLUG 1P
J9	*1-526-575-00	SOCKET, PLUG 1P

****

*A-1331-162-A CFB BOARD, COMPLETE
****

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION		
C101	1-101-821-00	CERAMIC	0.0022MF	500V
C102	1-101-821-00	CERAMIC	0.0022MF	500V
C103	1-101-821-00	CERAMIC	0.0022MF	500V
C104	1-101-821-00	CERAMIC	0.0022MF	500V
C105	1-101-821-00	CERAMIC	0.0022MF	500V

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION
CN75	1-564-505-11	PLUG, CONNECTOR 2P
CN76	*1-564-507-11	PLUG, CONNECTOR 4P
CN77	*1-564-514-11	PLUG, CONNECTOR 11P
CN78	*1-564-519-11	PLUG, CONNECTOR 4P
CN79	*1-564-528-11	PLUG, CONNECTOR 13P

<FILTER>

REF.NO.	PART NO.	DESCRIPTION
FL101	1-236-071-11	ENCAPSULATED COMPONENT
FL102	1-236-164-11	ENCAPSULATED COMPONENT
FL103	1-236-071-11	ENCAPSULATED COMPONENT
FL104	1-236-071-11	ENCAPSULATED COMPONENT
FL105	1-236-071-11	ENCAPSULATED COMPONENT
FL106	1-236-071-11	ENCAPSULATED COMPONENT
FL107	1-236-164-11	ENCAPSULATED COMPONENT
FL108	1-236-164-11	ENCAPSULATED COMPONENT
FL109	1-236-164-11	ENCAPSULATED COMPONENT
FL110	1-236-164-11	ENCAPSULATED COMPONENT

****

*A-1335-058-A CBR BOARD, COMPLETE
****

⚠*1-565-822-11 SOCKET, PIN 1P

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C301	1-163-038-91	CERAMIC CHIP	0.1MF		25V	
C302	1-126-395-11	ELECT	22MF	20%	16V	
C303	1-163-038-91	CERAMIC CHIP	0.1MF		25V	
C304	1-102-038-00	CERAMIC	0.001MF		500V	
C305	1-107-943-11	ELECT	10MF	20%	160V	
C307	1-163-245-11	CERAMIC CHIP	56PF	5%	50V	
C308	1-102-050-00	CERAMIC	0.01MF	99%	500V	
C309	1-107-963-11	ELECT	33MF	20%	250V	
C311	1-163-038-91	CERAMIC CHIP	0.1MF		25V	
C312	1-163-038-91	CERAMIC CHIP	0.1MF		25V	
C313	1-163-038-91	CERAMIC CHIP	0.1MF		25V	
C314	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V	
C315	1-136-177-00	FILM	1MF	5%	50V	
C316	1-126-395-11	ELECT	22MF	20%	16V	
C317	1-163-038-91	CERAMIC CHIP	0.1MF		25V	
C318	1-163-038-91	CERAMIC CHIP	0.1MF		25V	
C319	1-102-038-00	CERAMIC	0.001MF		500V	
C320	1-107-746-11	ELECT	10MF	20%	200V	
C322	1-163-038-91	CERAMIC CHIP	0.1MF		25V	
C323	1-163-038-91	CERAMIC CHIP	0.1MF		25V	
C324	1-163-038-91	CERAMIC CHIP	0.1MF		25V	
C325	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C326	1-163-038-91	CERAMIC CHIP	0.1MF		25V	
C327	1-163-038-91	CERAMIC CHIP	0.1MF		25V	
C328	1-163-038-91	CERAMIC CHIP	0.1MF		25V	
C329	1-126-395-11	ELECT	22MF	20%	16V	
C330	1-163-038-91	CERAMIC CHIP	0.1MF		25V	
C331	1-102-038-00	CERAMIC	0.001MF		500V	
C332	1-107-943-11	ELECT	10MF	20%	160V	
C333	1-163-131-00	CERAMIC CHIP	390PF	5%	50V	
C335	1-163-245-11	CERAMIC CHIP	56PF	5%	50V	
C336	1-163-038-91	CERAMIC CHIP	0.1MF		25V	
C338	1-163-038-91	CERAMIC CHIP	0.1MF		25V	
C339	1-163-038-91	CERAMIC CHIP	0.1MF		25V	
C340	1-163-038-91	CERAMIC CHIP	0.1MF		25V	
C341	1-126-395-11	ELECT	22MF	20%	16V	
C342	1-126-395-11	ELECT	22MF	20%	16V	

- The components identified by ⊠ in this manual have been carefully factory- selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

CBR

REF.NO.	PART NO.	DESCRIPTION		REMARK
C343	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C344	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C345	1-163-029-11	CERAMIC CHIP 0.0047MF		50V
C346	1-163-019-00	CERAMIC CHIP 0.0068MF	10%	50V
C347	1-163-019-00	CERAMIC CHIP 0.0068MF	10%	50V
C348	1-163-019-00	CERAMIC CHIP 0.0068MF	10%	50V
C350	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C351	1-102-038-00	CERAMIC 0.001MF		500V

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION
CN440	*1-564-527-11	PLUG, CONNECTOR 12P
CN442	1-691-756-11	PIN, CONNECTOR (PC BOARD) 2P
CN443	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P
CN444	*1-774-253-11	CONNECTOR, BOARD TO BOARD 8P
CN445	*1-774-253-11	CONNECTOR, BOARD TO BOARD 8P

<DIODE>

REF.NO.	PART NO.	DESCRIPTION
D301	8-719-800-76	DIODE 1SS226
D302	8-719-106-23	DIODE RD7.5M-B2
D303	8-719-801-78	DIODE 1SS184
D304	8-719-106-71	DIODE RD12M-B2
D306	8-719-801-78	DIODE 1SS184
D311	8-719-901-83	DIODE 1SS83
D312	8-719-901-83	DIODE 1SS83
D313	8-719-901-83	DIODE 1SS83
D314	8-719-901-83	DIODE 1SS83
D315	8-719-901-83	DIODE 1SS83
D316	8-719-901-83	DIODE 1SS83
D317	8-719-901-83	DIODE 1SS83
D318	8-719-901-83	DIODE 1SS83
D319	8-719-901-83	DIODE 1SS83
D320	8-719-901-83	DIODE 1SS83

<FILTER>

REF.NO.	PART NO.	DESCRIPTION
FL301	1-233-283-11	FILTER, EMI (SMD)
FL303	1-233-288-11	FILTER, EMI (SMD)
FL304	1-236-164-11	ENCAPSULATED COMPONENT
FL305	1-233-283-11	FILTER, EMI (SMD)
FL307	1-233-283-11	FILTER, EMI (SMD)
FL308	1-236-164-11	ENCAPSULATED COMPONENT
FL309	1-236-164-11	ENCAPSULATED COMPONENT

<IC>

REF.NO.	PART NO.	DESCRIPTION
IC301	8-749-011-19	IC VPA15H
IC302	8-759-710-78	IC NJM082BM
IC303	8-759-710-78	IC NJM082BM
IC304	8-749-011-45	IC NJL5152MD
IC305	8-749-011-19	IC VPA15H
IC307	8-759-710-78	IC NJM082BM

<JACK>

REF.NO.	PART NO.	DESCRIPTION
J301	⚠1-251-358-11	SOCKET, PICTURE TUBE

<COIL>

REF.NO.	PART NO.	DESCRIPTION	
L301	1-412-533-21	INDUCTOR	47UH
L302	1-410-750-41	INDUCTOR	0.47UH
L303	1-414-137-31	INDUCTOR	0.22UH
L304	1-412-533-21	INDUCTOR	47UH
L305	1-414-137-31	INDUCTOR	0.22UH
L306	1-410-498-11	INDUCTOR	1.2UH
L311	1-408-397-00	INDUCTOR	1UH

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION
Q301	8-729-107-31	TRANSISTOR 2SC3545-T43
Q302	8-729-145-13	TRANSISTOR 2SC3356-(R25)
Q303	8-729-804-63	TRANSISTOR 2SA1406-E
Q304	8-729-116-05	TRANSISTOR 2SK160-K5
Q305	8-729-107-31	TRANSISTOR 2SC3545-T43
Q306	8-729-145-13	TRANSISTOR 2SC3356-(R25)
Q307	8-729-804-63	TRANSISTOR 2SA1406-E
Q308	8-729-230-49	TRANSISTOR 2SC2712-YG

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R302	1-202-535-00	SOLID	27	20%	1/2W	
R303	1-202-818-00	SOLID	1K	20%	1/2W	
R304	1-202-525-00	SOLID	10	20%	1/2W	
R305	1-249-899-11	CARBON	100	5%	1/4W	F
R306	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R307	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R309	1-216-647-11	METAL CHIP	680	0.50%	1/10W	
R310	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R311	1-215-477-00	METAL	220K	1%	1/4W	
R314	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R315	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W	
R316	1-215-477-00	METAL	220K	1%	1/4W	
R317	1-249-440-11	CARBON	82K	5%	1/4W	
R318	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R319	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R320	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R321	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R322	1-216-689-11	METAL CHIP	39K	0.50%	1/10W	
R323	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R324	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R325	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R326	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R327	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R328	1-216-810-11	METAL CHIP	15K	0.50%	1/10W	
R330	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W	
R331	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W	
R332	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R333	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R334	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R335	1-247-692-11	CARBON	22	5%	1/4W	F
R336	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R337	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R338	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R339	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R340	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R341	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R344	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R345	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	
R346	1-259-878-11	CARBON	1.5M	5%	1/4W	
R347	1-202-535-00	SOLID	27	20%	1/2W	
R348	1-202-535-00	SOLID	27	20%	1/2W	
R349	1-259-884-11	CARBON	4.7M	5%	1/4W	
R350	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R351	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R352	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R353	1-216-019-00	METAL GLAZE	56	5%	1/10W	

<VARIABLE RESISTOR>

⊠RV301⚠	1-238-783-21	RES, ADJ, CERMET	500			

<SPARK GAP>

SG301	1-519-063-XX	DISCHARGING GAP				
SG302	1-519-063-XX	DISCHARGING GAP				
SG303	1-519-063-XX	DISCHARGING GAP				

****

*A-1335-060-A CAR BOARD, COMPLETE
****

*1-568-547-11 JACK, MINIATUER PIN

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C100	1-128-589-11	ELECT CHIP	47MF	20%		6.3V
C101	1-104-607-11	ELECT CHIP	47MF	20%		16V
C102	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C103	1-163-035-00	CERAMIC CHIP	0.047MF			50V
C104	1-163-035-00	CERAMIC CHIP	0.047MF			50V
C105	1-128-589-11	ELECT CHIP	47MF	20%		6.3V
C106	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C107	1-104-607-11	ELECT CHIP	47MF	20%		16V
C108	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C109	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C110	1-163-141-00	CERAMIC CHIP	0.001MF	5%		50V
C111	1-163-031-11	CERAMIC CHIP	0.01MF			50V
C112	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C113	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C114	1-164-222-11	CERAMIC CHIP	0.22MF			25V
C115	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C116	1-163-031-11	CERAMIC CHIP	0.01MF			50V
C117	1-135-091-91	TANTAL. CHIP	1MF	20%		16V
C118	1-163-031-11	CERAMIC CHIP	0.01MF			50V
C119	1-163-105-00	CERAMIC CHIP	33PF	5%		50V
C120	1-163-031-11	CERAMIC CHIP	0.01MF			50V
C121	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C122	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C123	1-135-091-91	TANTAL. CHIP	1MF	20%		16V
C124	1-135-091-91	TANTAL. CHIP	1MF	20%		16V
C125	1-164-506-11	CERAMIC CHIP	4.7MF			16V
C126	1-164-506-11	CERAMIC CHIP	4.7MF			16V
C127	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C128	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C129	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C130	1-135-091-91	TANTAL. CHIP	1MF	20%		16V
C131	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C132	1-135-092-21	TANTAL. CHIP	3.3MF	20%		16V
C133	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C134	1-135-091-91	TANTAL. CHIP	1MF	20%		16V
C135	1-163-031-11	CERAMIC CHIP	0.01MF			50V
C136	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C137	1-163-235-11	CERAMIC CHIP	22PF	5%		50V
C138	1-163-091-00	CERAMIC CHIP	8PF	0.25PF		50V
C139	1-135-091-91	TANTAL. CHIP	1MF	20%		16V
C140	1-163-031-11	CERAMIC CHIP	0.01MF			50V
C141	1-135-091-91	TANTAL. CHIP	1MF	20%		16V
C143	1-164-506-11	CERAMIC CHIP	4.7MF			16V
C144	1-135-155-21	TANTAL. CHIP	4.7MF	20%		16V
C145	1-128-451-11	ELECT CHIP	22MF	20%		16V
C146	1-135-091-91	TANTAL. CHIP	1MF	20%		16V
C147	1-135-091-91	TANTAL. CHIP	1MF	20%		16V
C148	1-135-091-91	TANTAL. CHIP	1MF	20%		16V
C149	1-128-451-11	ELECT CHIP	22MF	20%		16V
C150	1-135-091-91	TANTAL. CHIP	1MF	20%		16V
C151	1-164-004-11	CERAMIC CHIP	0.1MF	10%		25V
C152	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C153	1-163-031-11	CERAMIC CHIP	0.01MF			50V
C154	1-135-177-21	TANTAL. CHIP	1MF	20%		25V
C155	1-135-091-91	TANTAL. CHIP	1MF	20%		16V
C156	1-163-105-00	CERAMIC CHIP	33PF	5%		50V
C157	1-163-088-00	CERAMIC CHIP	5PF	0.25PF		50V
C158	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C159	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C160	1-135-091-91	TANTAL. CHIP	1MF	20%		16V
C161	1-135-091-91	TANTAL. CHIP	1MF	20%		16V
C162	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C163	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C164	1-128-451-11	ELECT CHIP	22MF	20%		16V
C165	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C166	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C167	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C168	1-128-451-11	ELECT CHIP	22MF	20%		16V
C169	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C170	1-164-232-11	CERAMIC CHIP	0.01MF	10%		50V
C171	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C172	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C177	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C185	1-128-451-11	ELECT CHIP	22MF	20%		16V
C187	1-163-031-11	CERAMIC CHIP	0.01MF			50V
C188	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C189	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C190	1-163-229-11	CERAMIC CHIP	12PF	5%		50V
C193	1-164-506-11	CERAMIC CHIP	4.7MF			16V
C194	1-164-506-11	CERAMIC CHIP	4.7MF			16V
C201	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C202	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C203	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C204	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C205	1-164-222-11	CERAMIC CHIP	0.22MF			25V
C206	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C207	1-164-005-11	CERAMIC CHIP	0.47MF			25V
C208	1-164-506-11	CERAMIC CHIP	4.7MF			16V
C209	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C210	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C211	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C212	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C213	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C214	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C215	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C216	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C217	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C218	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C219	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C220	1-163-038-91	CERAMIC CHIP	0.1MF			25V
C221	1-104-607-11	ELECT CHIP	47MF	20%		16V
C222	1-104-607-11	ELECT CHIP	47MF	20%		16V
C223	1-163-009-11	CERAMIC CHIP	0.001MF	10%		50V
C224	1-164-004-11	CERAMIC CHIP	0.1MF	10%		25V
C225	1-163-251-11	CERAMIC CHIP	100PF	5%		50V

- The components identified by ⊠ in this manual have been carefully factory- selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

CAR

REF.NO.	PART NO.	DESCRIPTION	REMARK
C226	1-163-038-91	CERAMIC CHIP 0.1MF	25V
		<CONNECTOR>	
CN301	1-573-790-21	SOCKET, CONNECTOR 24P	
CN302	*1-774-252-11	CONNECTOR, BOARD TO BOARD 8P	
CN303	*1-774-252-11	CONNECTOR, BOARD TO BOARD 8P	
		<DIODE>	
D100	8-719-801-78	DIODE 1SS184	
D101	8-719-801-78	DIODE 1SS184	
D102	8-719-800-76	DIODE 1SS226	
D103	8-719-105-91	DIODE RD5.6M-TIB2	
D104	8-719-801-78	DIODE 1SS184	
D105	8-719-800-76	DIODE 1SS226	
D106	8-719-106-80	DIODE RD13M-B2	
D107	8-719-800-76	DIODE 1SS226	
D108	8-719-801-78	DIODE 1SS184	
D110	8-719-104-34	DIODE 1S2836	
D111	8-719-801-78	DIODE 1SS184	
D112	8-719-801-78	DIODE 1SS184	
D113	8-719-801-78	DIODE 1SS184	
D125	8-719-801-78	DIODE 1SS184	
D126	8-719-801-78	DIODE 1SS184	
		<FILTER>	
FL100	1-233-288-11	FILTER, EMI (SMD)	
FL101	1-233-283-11	FILTER, EMI (SMD)	
FL102	1-233-283-11	FILTER, EMI (SMD)	
FL103	1-233-283-11	FILTER, EMI (SMD)	
FL104	1-233-283-11	FILTER, EMI (SMD)	
FL105	1-233-283-11	FILTER, EMI (SMD)	
FL106	1-233-288-11	FILTER, EMI (SMD)	
FL107	1-233-288-11	FILTER, EMI (SMD)	
FL108	1-233-288-11	FILTER, EMI (SMD)	
FL109	1-233-288-11	FILTER, EMI (SMD)	
FL110	1-233-288-11	FILTER, EMI (SMD)	
FL111	1-233-288-11	FILTER, EMI (SMD)	
FL112	1-233-283-11	FILTER, EMI (SMD)	
FL113	1-233-283-11	FILTER, EMI (SMD)	
FL114	1-233-283-11	FILTER, EMI (SMD)	
FL115	1-233-288-11	FILTER, EMI (SMD)	
FL116	1-233-288-11	FILTER, EMI (SMD)	
FL117	1-233-288-11	FILTER, EMI (SMD)	
FL118	1-233-288-11	FILTER, EMI (SMD)	
FL119	1-233-288-11	FILTER, EMI (SMD)	
		<IC>	
IC100	8-759-710-78	IC NJM082BM	
IC101	8-759-710-78	IC NJM082BM	
IC102	8-759-710-78	IC NJM082BM	
IC103	8-759-710-78	IC NJM082BM	
IC104	8-759-710-78	IC NJM082BM	
IC105	8-759-011-65	IC MC74HC4053F	
IC106	8-759-251-32	IC NJM4200M	
IC107	8-759-710-78	IC NJM082BM	
		<CONDUCTOR CHIP>	
JC101	1-216-295-91	CONDUCTOR, CHIP	

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<TRANSISTOR>	
Q100	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q101	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q102	8-729-216-22	TRANSISTOR 2SA1162-G	
Q103	8-729-116-05	TRANSISTOR 2SK160-K5	
Q104	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q105	8-729-216-22	TRANSISTOR 2SA1162-G	
Q106	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q107	8-729-216-22	TRANSISTOR 2SA1162-G	
Q108	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q109	8-729-216-22	TRANSISTOR 2SA1162-G	
Q110	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q111	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q112	8-729-216-22	TRANSISTOR 2SA1162-G	
Q113	8-729-216-22	TRANSISTOR 2SA1162-G	
Q114	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q115	8-729-923-06	TRANSISTOR FMW-8	
Q116	8-729-923-06	TRANSISTOR FMW-8	
Q117	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q118	8-729-216-22	TRANSISTOR 2SA1162-G	
Q119	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q120	8-729-216-22	TRANSISTOR 2SA1162-G	
Q121	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q122	8-729-140-75	TRANSISTOR 2SD999-CLCK	
Q123	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q124	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q125	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q126	8-729-116-05	TRANSISTOR 2SK160-K5	
Q127	8-729-901-01	TRANSISTOR DTC144EK	
Q128	8-729-901-06	TRANSISTOR DTA144EK	
Q129	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q130	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q131	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q132	8-729-129-54	TRANSISTOR 2SC2954	
Q133	8-729-901-01	TRANSISTOR DTC144EK	
Q134	8-729-216-22	TRANSISTOR 2SA1162-G	
Q135	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q136	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q137	8-729-116-05	TRANSISTOR 2SK160-K5	
Q138	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q139	8-729-901-01	TRANSISTOR DTC144EK	
Q140	8-729-901-06	TRANSISTOR DTA144EK	
Q141	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q142	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q143	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q144	8-729-129-54	TRANSISTOR 2SC2954	
Q145	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q146	8-729-129-54	TRANSISTOR 2SC2954	
Q147	8-729-145-13	TRANSISTOR 2SC3356-(R25)	
Q148	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q149	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q150	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q151	8-729-143-43	TRANSISTOR 2SA1463IK	
Q161	8-729-901-01	TRANSISTOR DTC144EK	
Q201	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q202	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q203	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q204	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q205	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q206	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q207	8-729-230-49	TRANSISTOR 2SC2712-YG	

CAR

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q208	8-729-116-05	TRANSISTOR 2SK160-K5	
Q209	8-729-923-06	TRANSISTOR FMW-8	
Q210	8-729-901-01	TRANSISTOR DTC144EK	
Q211	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q212	8-729-145-13	TRANSISTOR 2SC3356-(R25)	
Q213	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q214	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q215	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q216	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q217	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q218	8-729-216-22	TRANSISTOR 2SA1162-G	
Q219	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q221	8-729-230-49	TRANSISTOR 2SC2712-YG	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R100	1-216-631-11	METAL CHIP	150	0.50%	1/10W	
R102	1-216-631-11	METAL CHIP	150	0.50%	1/10W	
R104	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R105	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R106	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R107	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R108	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R109	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R110	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R111	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R112	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R113	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R114	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R115	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R116	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R117	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R118	1-216-611-11	METAL CHIP	22	0.50%	1/10W	
R119	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R120	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R121	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R122	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R123	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R124	1-216-019-00	METAL GLAZE	56	5%	1/10W	
R125	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R126	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R127	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R128	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R129	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R130	1-216-689-11	METAL CHIP	39K	0.50%	1/10W	
R131	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R132	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R133	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R134	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R135	1-216-009-00	METAL GLAZE	22	5%	1/10W	
R136	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R137	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R138	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R139	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R140	1-216-649-11	METAL CHIP	820	0.50%	1/10W	
R141	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R142	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R143	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R144	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R145	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R146	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R147	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R148	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R149	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R150	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R151	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R152	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R153	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R154	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R155	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R156	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R157	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R158	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R159	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R160	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R161	1-216-633-11	METAL CHIP	180	0.50%	1/10W	
R162	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R163	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R164	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R165	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R166	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R167	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R168	1-216-047-91	METAL GLAZE	820	5%	1/10W	
R169	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R170	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R171	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R172	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R173	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R174	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R175	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R176	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R177	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R178	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R179	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R180	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R181	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R182	1-216-635-11	METAL CHIP	220	0.50%	1/10W	
R183	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R184	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R186	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R187	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R188	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R189	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R190	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R191	1-216-639-11	METAL CHIP	330	0.50%	1/10W	
R192	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R193	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R195	1-216-641-11	METAL CHIP	390	0.50%	1/10W	
R196	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R197	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R198	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R199	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R200	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R202	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R203	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R204	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R205	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R206	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R207	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R208	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R209	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R210	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R211	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R212	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R213	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R214	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R215	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	

CAR

REF.NO.	PART NO.	DESCRIPTION				REMARK
R216	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R217	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R218	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R219	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R220	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R221	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R222	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R223	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R224	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R225	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R226	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R227	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R228	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R229	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R230	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R231	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R232	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R233	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R234	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R235	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R236	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R237	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R238	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R239	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R240	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R241	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R242	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R243	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R244	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R245	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R246	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R247	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R248	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R249	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R250	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R251	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R252	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R253	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R254	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R255	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R256	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R257	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R258	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R259	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W	
R260	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R261	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W	
R262	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R263	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R264	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R265	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R266	1-216-623-11	METAL CHIP	68	0.50%	1/10W	
R267	1-216-631-11	METAL CHIP	150	0.50%	1/10W	
R268	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R269	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W	
R270	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R271	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R272	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R273	1-216-639-11	METAL CHIP	330	0.50%	1/10W	
R274	1-216-639-11	METAL CHIP	330	0.50%	1/10W	
R275	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R276	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R277	1-216-637-11	METAL CHIP	270	0.50%	1/10W	
R278	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R279	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R280	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R281	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R282	1-216-635-11	METAL CHIP	220	0.50%	1/10W	
R283	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R284	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R285	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R286	1-216-635-11	METAL CHIP	220	0.50%	1/10W	
R287	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	
R288	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R289	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R290	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R291	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R292	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R293	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R294	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R295	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R296	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R297	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R298	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R299	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R1100	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R1101	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1102	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	
R1103	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R1104	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1106	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1107	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1108	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R1109	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1110	1-216-019-00	METAL GLAZE	56	5%	1/10W	
R1111	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1112	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R1113	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R1114	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1115	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1116	1-216-019-00	METAL GLAZE	56	5%	1/10W	
R1117	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1118	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1119	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1120	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R1121	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1122	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1123	1-216-019-00	METAL GLAZE	56	5%	1/10W	
R1124	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R1125	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1126	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1127	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1128	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1129	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1130	1-216-659-00	METAL GLAZE	2.2K	5%	1/10W	
R1131	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R1132	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1133	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1134	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1135	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1136	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R1137	1-216-627-11	METAL GLAZE	100	5%	1/10W	
R1138	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1139	1-216-049-91	METAL GLAZE	1K	5%	1/10W	

<VARIABLE RESISTOR>

RV101	1-230-870-11	RES, ADJ, METAL GLAZE 10K

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

CBG

****

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*A-1335-061-A	CBG BOARD, COMPLETE			
	⚠*1-565-822-11	SOCKET, PIN 1P			
		<CAPACITOR>			
C401	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C402	1-126-395-11	ELECT	22MF	20%	16V
C403	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C404	1-102-038-00	CERAMIC	0.001MF		500V
C405	1-107-943-11	ELECT	10MF	20%	160V
C407	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C409	1-107-963-11	ELECT	33MF	20%	250V
C411	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C412	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C413	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C414	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C415	1-136-177-00	FILM	1MF	5%	50V
C416	1-126-395-11	ELECT	22MF	20%	16V
C417	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C418	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C419	1-102-038-00	CERAMIC	0.001MF		500V
C420	1-107-746-11	ELECT	10MF	20%	200V
C422	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C423	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C424	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C425	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C426	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C427	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C428	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C429	1-126-395-11	ELECT	22MF	20%	16V
C430	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C431	1-102-038-00	CERAMIC	0.001MF		500V
C432	1-107-943-11	ELECT	10MF	20%	160V
C433	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C435	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C436	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C438	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C439	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C440	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C441	1-126-395-11	ELECT	22MF	20%	16V
C442	1-126-395-11	ELECT	22MF	20%	16V
C443	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C444	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C445	1-163-029-11	CERAMIC CHIP	0.0047MF		50V
C446	1-163-019-00	CERAMIC CHIP	0.0068MF	10%	50V
C447	1-163-019-00	CERAMIC CHIP	0.0068MF	10%	50V
C448	1-163-019-00	CERAMIC CHIP	0.0068MF	10%	50V
C449	1-102-050-00	CERAMIC	0.01MF	99%	500V
C450	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C451	1-102-038-00	CERAMIC	0.001MF		500V
		<CONNECTOR>			
CN450	*1-564-527-11	PLUG, CONNECTOR 12P			
CN452	1-691-756-11	PIN, CONNECTOR (PC BOARD) 2P			
CN453	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P			
CN454	*1-774-253-11	CONNECTOR, BOARD TO BOARD 8P			
CN455	*1-774-253-11	CONNECTOR, BOARD TO BOARD 8P			
		<DIODE>			
D401	8-719-800-76	DIODE 1SS226			
D402	8-719-106-23	DIODE RD7.5M-B2			
D403	8-719-801-78	DIODE 1SS184			
D404	8-719-106-71	DIODE RD12M-B2			
D406	8-719-801-78	DIODE 1SS184			
D411	8-719-901-83	DIODE 1SS83			
D412	8-719-901-83	DIODE 1SS83			
D413	8-719-901-83	DIODE 1SS83			
D414	8-719-901-83	DIODE 1SS83			
D415	8-719-901-83	DIODE 1SS83			
D416	8-719-901-83	DIODE 1SS83			
D417	8-719-901-83	DIODE 1SS83			
D418	8-719-901-83	DIODE 1SS83			
D421	1-216-295-91	CONDUCTOR, CHIP			
		<FILTER>			
FL401	1-233-283-11	FILTER, EMI (SMD)			
FL403	1-233-288-11	FILTER, EMI (SMD)			
FL404	1-236-164-11	ENCAPSULATED COMPONENT			
FL405	1-233-283-11	FILTER, EMI (SMD)			
FL407	1-233-283-11	FILTER, EMI (SMD)			
FL408	1-236-164-11	ENCAPSULATED COMPONENT			
FL409	1-236-164-11	ENCAPSULATED COMPONENT			
		<IC>			
IC401	8-749-011-19	IC VPA15H			
IC402	8-759-710-78	IC NJM082BM			
IC403	8-759-710-78	IC NJM082BM			
IC404	8-749-011-45	IC NJL5152MD			
IC405	8-749-011-19	IC VPA15H			
IC407	8-759-710-78	IC NJM082BM			
		<SOCKET>			
J401	⚠1-251-358-11	SOCKET, PICTURE TUBE			
		<COIL>			
L401	1-412-533-21	INDUCTOR	47UH		
L402	1-410-750-41	INDUCTOR	0.47UH		
L403	1-414-137-31	INDUCTOR	0.22UH		
L404	1-412-533-21	INDUCTOR	47UH		
L405	1-414-137-31	INDUCTOR	0.22UH		
L406	1-410-498-11	INDUCTOR	1.2UH		
L411	1-408-397-00	INDUCTOR	1UH		
		<TRANSISTOR>			
Q401	8-729-107-31	TRANSISTOR 2SC3545-T43			
Q402	8-729-145-13	TRANSISTOR 2SC3356-(R25)			
Q403	8-729-804-63	TRANSISTOR 2SA1406-E			
Q404	8-729-116-05	TRANSISTOR 2SK160-K5			
Q405	8-729-107-31	TRANSISTOR 2SC3545-T43			
Q406	8-729-145-13	TRANSISTOR 2SC3356-(R25)			
Q407	8-729-804-63	TRANSISTOR 2SA1406-E			
Q408	8-729-230-49	TRANSISTOR 2SC2712-YG			

CBG **CAG**

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R402	1-202-535-00	SOLID	27	20%	1/2W	
R403	1-202-818-00	SOLID	1K	20%	1/2W	
R404	1-202-525-00	SOLID	10	20%	1/2W	
R405	1-249-899-11	CARBON	100	5%	1/4W	F
R406	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R407	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R409	1-216-647-11	METAL CHIP	680	0.50%	1/10W	
R410	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R411	1-215-477-00	METAL	220K	1%	1/4W	
R414	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R415	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W	
R416	1-215-477-00	METAL	220K	1%	1/4W	
R417	1-249-440-11	CARBON	82K	5%	1/4W	
R418	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R419	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R420	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R421	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R422	1-216-689-11	METAL CHIP	39K	0.50%	1/10W	
R423	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R424	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R425	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R426	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R427	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R428	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R430	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W	
R431	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W	
R432	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R433	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R434	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R435	1-247-692-11	CARBON	22	5%	1/4W	F
R436	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R437	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R438	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R439	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R440	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R441	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R444	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R445	1-247-825-31	CARBON	560	5%	1/4W	
R446	1-259-878-11	CARBON	1.5M	5%	1/4W	
R447	1-202-535-00	SOLID	27	20%	1/2W	
R448	1-202-535-00	SOLID	27	20%	1/2W	
R449	1-259-884-11	CARBON	4.7M	5%	1/4W	
R450	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R451	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R452	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R453	1-216-019-00	METAL GLAZE	56	5%	1/10W	

<VARIABLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION
⊠RV401⚠	1-238-783-21	RES, ADJ, CERMET 500

<SPARK GAP>

REF.NO.	PART NO.	DESCRIPTION
SG401	1-519-063-XX	DISCHARGING GAP
SG402	1-519-063-XX	DISCHARGING GAP
SG403	1-519-063-XX	DISCHARGING GAP

****

*A-1335-062-A CAG BOARD, COMPLETE
****

<JACK>

REF.NO.	PART NO.	DESCRIPTION
CAGJ1	*1-568-547-11	JACK, MINIATUER PIN

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C600	1-128-589-11	ELECT CHIP	47MF	20%	6.3V
C601	1-104-607-11	ELECT CHIP	47MF	20%	16V
C602	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C603	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C604	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C605	1-128-589-11	ELECT CHIP	47MF	20%	6.3V
C606	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C607	1-104-607-11	ELECT CHIP	47MF	20%	16V
C608	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C609	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C610	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C611	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C612	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C613	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C614	1-164-222-11	CERAMIC CHIP	0.22MF		25V
C615	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C616	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C617	1-135-091-91	TANTAL. CHIP	1MF	20%	16V
C618	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C619	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C620	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C621	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C622	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C623	1-135-091-91	TANTAL. CHIP	1MF	20%	16V
C624	1-135-091-91	TANTAL. CHIP	1MF	20%	16V
C625	1-164-506-11	CERAMIC CHIP	4.7MF		16V
C626	1-164-506-11	CERAMIC CHIP	4.7MF		16V
C627	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C628	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C629	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C630	1-135-091-91	TANTAL. CHIP	1MF	20%	16V
C631	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C632	1-135-092-21	TANTAL. CHIP	3.3MF	20%	16V
C633	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C634	1-135-091-91	TANTAL. CHIP	1MF	20%	16V
C635	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C636	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C637	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C638	1-163-091-00	CERAMIC CHIP	8PF	0.25PF	50V
C639	1-135-091-91	TANTAL. CHIP	1MF	20%	16V
C640	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C641	1-135-091-91	TANTAL. CHIP	1MF	20%	16V
C643	1-164-506-11	CERAMIC CHIP	4.7MF		16V
C644	1-135-155-21	TANTAL. CHIP	4.7MF	20%	16V
C645	1-128-451-11	ELECT CHIP	22MF	20%	16V
C646	1-135-091-91	TANTAL. CHIP	1MF	20%	16V
C647	1-135-091-91	TANTAL. CHIP	1MF	20%	16V
C648	1-135-091-91	TANTAL. CHIP	1MF	20%	16V
C649	1-128-451-11	ELECT CHIP	22MF	20%	16V
C650	1-135-091-91	TANTAL. CHIP	1MF	20%	16V
C651	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C652	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C653	1-163-031-11	CERAMIC CHIP	0.01MF		50V

- The components identified by ⊠ in this manual have been carefully factory- selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

REF.NO.	PART NO.	DESCRIPTION		REMARK
C654	1-135-177-21	TANTAL. CHIP 1MF	20%	25V
C655	1-135-091-91	TANTAL. CHIP 1MF	20%	16V
C656	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C657	1-163-088-00	CERAMIC CHIP 5PF	0.25PF	50V
C658	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C659	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C660	1-135-091-91	TANTAL. CHIP 1MF	20%	16V
C661	1-135-091-91	TANTAL. CHIP 1MF	20%	16V
C662	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C663	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C664	1-128-451-11	ELECT CHIP 22MF	20%	16V
C665	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C666	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C667	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C668	1-128-451-11	ELECT CHIP 22MF	20%	16V
C669	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C670	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C671	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C672	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C677	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C685	1-128-451-11	ELECT CHIP 22MF	20%	16V
C687	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C688	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C689	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C690	1-163-229-11	CERAMIC CHIP 12PF	5%	50V
C693	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C694	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C701	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C702	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C703	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C704	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C705	1-164-222-11	CERAMIC CHIP 0.22MF		25V
C706	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C707	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C708	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C709	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C710	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C711	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C712	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C713	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C714	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C715	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C716	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C717	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C718	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C719	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C720	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C721	1-104-607-11	ELECT CHIP 47MF	20%	16V
C722	1-104-607-11	ELECT CHIP 47MF	20%	16V
C723	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C724	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C725	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C726	1-163-038-91	CERAMIC CHIP 0.1MF		25V

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN601	1-573-790-21	SOCKET, CONNECTOR 24P	
CN602	*1-774-252-11	CONNECTOR, BOARD TO BOARD 8P	
CN603	*1-774-252-11	CONNECTOR, BOARD TO BOARD 8P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D600	8-719-801-78	DIODE 1SS184	
D601	8-719-801-78	DIODE 1SS184	
D602	8-719-800-76	DIODE 1SS226	
D603	8-719-105-91	DIODE RD5.6M-TIB2	
D604	8-719-801-78	DIODE 1SS184	
D605	8-719-800-76	DIODE 1SS226	
D606	8-719-106-80	DIODE RD13M-B2	
D607	8-719-800-76	DIODE 1SS226	
D608	8-719-801-78	DIODE 1SS184	
D610	8-719-104-34	DIODE 1S2836	
D611	8-719-801-78	DIODE 1SS184	
D612	8-719-801-78	DIODE 1SS184	
D625	8-719-801-78	DIODE 1SS184	
D626	8-719-801-78	DIODE 1SS184	

<FILTER>

REF.NO.	PART NO.	DESCRIPTION	REMARK
FL600	1-233-288-11	FILTER, EMI (SMD)	
FL601	1-233-283-11	FILTER, EMI (SMD)	
FL602	1-233-283-11	FILTER, EMI (SMD)	
FL603	1-233-283-11	FILTER, EMI (SMD)	
FL604	1-233-283-11	FILTER, EMI (SMD)	
FL605	1-233-283-11	FILTER, EMI (SMD)	
FL606	1-233-288-11	FILTER, EMI (SMD)	
FL607	1-233-288-11	FILTER, EMI (SMD)	
FL608	1-233-288-11	FILTER, EMI (SMD)	
FL609	1-233-288-11	FILTER, EMI (SMD)	
FL610	1-233-288-11	FILTER, EMI (SMD)	
FL611	1-233-288-11	FILTER, EMI (SMD)	
FL612	1-233-283-11	FILTER, EMI (SMD)	
FL613	1-233-283-11	FILTER, EMI (SMD)	
FL614	1-233-283-11	FILTER, EMI (SMD)	
FL615	1-233-288-11	FILTER, EMI (SMD)	
FL616	1-233-288-11	FILTER, EMI (SMD)	
FL617	1-233-288-11	FILTER, EMI (SMD)	
FL618	1-233-288-11	FILTER, EMI (SMD)	
FL619	1-233-288-11	FILTER, EMI (SMD)	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC600	8-759-710-78	IC NJM082BM	
IC601	8-759-710-78	IC NJM082BM	
IC602	8-759-710-78	IC NJM082BM	
IC603	8-759-710-78	IC NJM082BM	
IC604	8-759-710-78	IC NJM082BM	
IC605	8-759-011-65	IC MC74HC4053F	
IC606	8-759-251-32	IC NJM4200M	
IC607	8-759-710-78	IC NJM082BM	

<CONDUCTOR CHIP>

REF.NO.	PART NO.	DESCRIPTION	REMARK
JC601	1-216-295-91	CONDUCTOR, CHIP	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q600	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q601	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q602	8-729-216-22	TRANSISTOR 2SA1162-G	
Q603	8-729-116-05	TRANSISTOR 2SK160-K5	
Q604	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q605	8-729-216-22	TRANSISTOR 2SA1162-G	
Q606	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q607	8-729-216-22	TRANSISTOR 2SA1162-G	
Q608	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q609	8-729-216-22	TRANSISTOR 2SA1162-G	

CAG

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q610	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q611	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q612	8-729-216-22	TRANSISTOR 2SA1162-G	
Q613	8-729-216-22	TRANSISTOR 2SA1162-G	
Q614	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q615	8-729-923-06	TRANSISTOR FMW-8	
Q616	8-729-923-06	TRANSISTOR FMW-8	
Q617	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q618	8-729-216-22	TRANSISTOR 2SA1162-G	
Q619	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q620	8-729-216-22	TRANSISTOR 2SA1162-G	
Q621	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q622	8-729-140-75	TRANSISTOR 2SD999-CLCK	
Q623	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q624	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q625	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q626	8-729-116-05	TRANSISTOR 2SK160-K5	
Q627	8-729-901-01	TRANSISTOR DTC144EK	
Q628	8-729-901-06	TRANSISTOR DTA144EK	
Q629	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q630	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q631	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q632	8-729-129-54	TRANSISTOR 2SC2954	
Q633	8-729-901-01	TRANSISTOR DTC144EK	
Q634	8-729-216-22	TRANSISTOR 2SA1162-G	
Q635	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q636	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q637	8-729-116-05	TRANSISTOR 2SK160-K5	
Q638	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q639	8-729-901-01	TRANSISTOR DTC144EK	
Q640	8-729-901-06	TRANSISTOR DTA144EK	
Q641	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q642	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q643	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q644	8-729-129-54	TRANSISTOR 2SC2954	
Q645	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q646	8-729-129-54	TRANSISTOR 2SC2954	
Q647	8-729-145-13	TRANSISTOR 2SC3356-(R25)	
Q649	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q650	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q651	8-729-143-43	TRANSISTOR 2SA1463IK	
Q661	8-729-901-01	TRANSISTOR DTC144EK	
Q701	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q702	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q703	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q704	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q705	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q706	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q707	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q708	8-729-116-05	TRANSISTOR 2SK160-K5	
Q709	8-729-923-06	TRANSISTOR FMW-8	
Q710	8-729-901-01	TRANSISTOR DTC144EK	
Q711	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q712	8-729-145-13	TRANSISTOR 2SC3356-(R25)	
Q713	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q714	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q715	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q716	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q717	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q718	8-729-216-22	TRANSISTOR 2SA1162-G	
Q721	8-729-230-49	TRANSISTOR 2SC2712-YG	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
R600	1-216-631-11	METAL CHIP 150 0.50% 1/10W	
R602	1-216-631-11	METAL CHIP 150 0.50% 1/10W	
R604	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R605	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R606	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R607	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R608	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R609	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R610	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R611	1-216-021-00	METAL GLAZE 68 5% 1/10W	
R612	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R613	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R614	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R615	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R616	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R617	1-216-017-91	METAL GLAZE 47 5% 1/10W	
R618	1-216-611-11	METAL CHIP 22 0.50% 1/10W	
R619	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R620	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R621	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R622	1-216-097-91	METAL GLAZE 100K 5% 1/10W	
R623	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R624	1-216-019-00	METAL GLAZE 56 5% 1/10W	
R625	1-216-035-00	METAL GLAZE 270 5% 1/10W	
R626	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R627	1-216-121-91	METAL GLAZE 1M 5% 1/10W	
R628	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R629	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R630	1-216-689-11	METAL CHIP 39K 0.50% 1/10W	
R631	1-216-671-11	METAL CHIP 6.8K 0.50% 1/10W	
R632	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R633	1-216-663-11	METAL CHIP 3.3K 0.50% 1/10W	
R634	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R635	1-216-009-00	METAL GLAZE 22 5% 1/10W	
R636	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R637	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R638	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R639	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R640	1-216-649-11	METAL CHIP 820 0.50% 1/10W	
R641	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R642	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R643	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R644	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R645	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R646	1-216-021-00	METAL GLAZE 68 5% 1/10W	
R647	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R648	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R649	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R650	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R651	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R652	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R653	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R654	1-216-097-91	METAL GLAZE 100K 5% 1/10W	
R655	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R656	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R657	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R658	1-216-063-91	METAL GLAZE 3.9K 5% 1/10W	
R659	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R660	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R661	1-216-633-11	METAL CHIP 180 0.50% 1/10W	
R662	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R663	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R664	1-216-073-00	METAL GLAZE 10K 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R665	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R666	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R667	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R668	1-216-047-91	METAL GLAZE	820	5%	1/10W	
R669	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R670	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R671	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R672	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R673	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R674	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R675	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R676	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R677	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R678	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R679	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R680	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R681	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R682	1-216-635-11	METAL CHIP	220	0.50%	1/10W	
R683	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R684	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R686	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R687	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R688	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R689	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R690	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R691	1-216-639-11	METAL CHIP	330	0.50%	1/10W	
R692	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R693	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R695	1-216-641-11	METAL CHIP	390	0.50%	1/10W	
R696	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R697	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R698	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R699	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R700	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R702	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R703	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R704	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R705	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R706	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R707	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R708	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R709	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R710	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R711	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R712	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R713	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R714	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R715	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R716	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R717	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R718	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R719	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R720	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R721	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R722	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R723	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R724	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R725	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R726	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R727	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R728	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R729	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R730	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R731	1-216-031-00	METAL GLAZE	180	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R732	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R733	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R734	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R735	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R736	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R737	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R738	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R739	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R740	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R741	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R742	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R743	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R744	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R745	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R746	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R747	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R748	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R749	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R750	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R751	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R752	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R753	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R754	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R755	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R756	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R757	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R758	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R759	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W	
R760	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R761	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W	
R762	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R763	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R764	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R766	1-216-623-11	METAL CHIP	68	0.50%	1/10W	
R767	1-216-631-11	METAL CHIP	150	0.50%	1/10W	
R768	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R769	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W	
R770	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R771	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R772	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R773	1-216-639-11	METAL CHIP	330	0.50%	1/10W	
R774	1-216-639-11	METAL CHIP	330	0.50%	1/10W	
R775	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R776	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R777	1-216-637-11	METAL CHIP	270	0.50%	1/10W	
R778	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R779	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R780	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R781	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R782	1-216-635-11	METAL CHIP	220	0.50%	1/10W	
R783	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R784	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R785	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R786	1-216-635-11	METAL CHIP	220	0.50%	1/10W	
R787	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	
R788	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R789	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R790	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R791	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R792	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R793	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R794	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R795	1-216-025-91	METAL GLAZE	100	5%	1/10W	

CAG **CBB**

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R796	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R797	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R798	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R799	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R1600	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R1601	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1602	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	
R1603	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R1604	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1606	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1607	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1608	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R1609	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1610	1-216-019-00	METAL GLAZE	56	5%	1/10W	
R1611	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1612	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R1613	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R1614	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1615	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1616	1-216-019-00	METAL GLAZE	56	5%	1/10W	
R1617	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1618	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1619	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1620	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R1621	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1622	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1623	1-216-019-00	METAL GLAZE	56	5%	1/10W	
R1624	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R1625	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1626	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1627	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1628	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1629	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1630	1-216-657-11	METAL GLAZE	1.8K	5%	1/10W	
R1631	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R1636	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R1637	1-216-629-11	METAL GLAZE	120	5%	1/10W	
R1638	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1639	1-216-049-91	METAL GLAZE	1K	5%	1/10W	

<VARIABLE RESISTOR>

RV601	1-230-870-11	RES, ADJ, METAL GLAZE 10K

****

*A-1335-063-A CBB BOARD, COMPLETE
****

⚠*1-565-822-11 SOCKET, PIN 1P

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C501	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C502	1-126-395-11	ELECT	22MF	20%	16V
C503	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C504	1-102-038-00	CERAMIC	0.001MF		500V
C505	1-107-943-11	ELECT	10MF	20%	160V
C507	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C508	1-102-050-00	CERAMIC	0.01MF	99%	500V
C509	1-107-963-11	ELECT	33MF	20%	250V
C511	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C512	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C513	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C514	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C515	1-136-177-00	FILM	1MF	5%	50V
C516	1-126-395-11	ELECT	22MF	20%	16V
C517	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C518	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C519	1-102-038-00	CERAMIC	0.001MF		500V
C520	1-107-746-11	ELECT	10MF	20%	200V
C522	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C523	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C524	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C525	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C526	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C527	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C528	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C529	1-126-395-11	ELECT	22MF	20%	16V
C530	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C531	1-102-038-00	CERAMIC	0.001MF		500V
C532	1-107-943-11	ELECT	10MF	20%	160V
C533	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C535	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C536	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C538	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C539	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C540	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C541	1-126-395-11	ELECT	22MF	20%	16V
C542	1-126-395-11	ELECT	22MF	20%	16V
C543	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C544	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C545	1-163-029-11	CERAMIC CHIP	0.0047MF		50V
C546	1-163-019-00	CERAMIC CHIP	0.0068MF	10%	50V
C547	1-163-019-00	CERAMIC CHIP	0.0068MF	10%	50V
C548	1-163-019-00	CERAMIC CHIP	0.0068MF	10%	50V
C550	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C551	1-102-038-00	CERAMIC	0.001MF		500V

<CONNECTOR>

CN460	*1-564-527-11	PLUG, CONNECTOR 12P
CN462	1-691-756-11	PIN, CONNECTOR (PC BOARD) 2P
CN463	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P
CN464	*1-774-253-11	CONNECTOR, BOARD TO BOARD 8P
CN465	*1-774-253-11	CONNECTOR, BOARD TO BOARD 8P

<DIODE>

D501	8-719-800-76	DIODE 1SS226
D502	8-719-106-23	DIODE RD7.5M-B2
D503	8-719-801-78	DIODE 1SS184
D504	8-719-106-71	DIODE RD12M-B2
D506	8-719-801-78	DIODE 1SS184
D511	8-719-901-83	DIODE 1SS83
D512	8-719-901-83	DIODE 1SS83
D513	8-719-901-83	DIODE 1SS83
D514	8-719-901-83	DIODE 1SS83
D515	8-719-901-83	DIODE 1SS83
D516	8-719-901-83	DIODE 1SS83
D517	8-719-901-83	DIODE 1SS83
D518	8-719-901-83	DIODE 1SS83
D519	8-719-901-83	DIODE 1SS83
D520	8-719-901-83	DIODE 1SS83

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

<FILTER>

REF.NO.	PART NO.	DESCRIPTION	REMARK
FL501	1-233-283-11	FILTER, EMI (SMD)	
FL503	1-233-288-11	FILTER, EMI (SMD)	
FL504	1-236-164-11	ENCAPSULATED COMPONENT	
FL505	1-233-283-11	FILTER, EMI (SMD)	
FL507	1-233-283-11	FILTER, EMI (SMD)	
FL508	1-236-164-11	ENCAPSULATED COMPONENT	
FL509	1-236-164-11	ENCAPSULATED COMPONENT	

<IC>

IC501	8-749-011-19	IC VPA15H
IC502	8-759-710-78	IC NJM082BM
IC503	8-759-710-78	IC NJM082BM
IC504	8-749-011-45	IC NJL5152MD
IC505	8-749-011-19	IC VPA15H
IC507	8-759-710-78	IC NJM082BM

<SOCKET>

J501 ⚠	1-251-358-11	SOCKET, PICTURE TUBE

<COIL>

L501	1-412-533-21	INDUCTOR	47UH
L502	1-410-750-41	INDUCTOR	0.47UH
L503	1-414-137-31	INDUCTOR	0.22UH
L504	1-412-533-21	INDUCTOR	47UH
L505	1-414-137-31	INDUCTOR	0.22UH
L506	1-410-498-11	INDUCTOR	1.2UH
L511	1-408-397-00	INDUCTOR	1UH

<TRANSISTOR>

Q501	8-729-107-31	TRANSISTOR 2SC3545-T43
Q502	8-729-145-13	TRANSISTOR 2SC3356-(R25)
Q503	8-729-804-63	TRANSISTOR 2SA1406-E
Q504	8-729-116-05	TRANSISTOR 2SK160-K5
Q505	8-729-107-31	TRANSISTOR 2SC3545-T43
Q506	8-729-145-13	TRANSISTOR 2SC3356-(R25)
Q507	8-729-804-63	TRANSISTOR 2SA1406-E
Q508	8-729-230-49	TRANSISTOR 2SC2712-YG

<RESISTOR>

R502	1-202-535-00	SOLID	27	20%	1/2W	
R503	1-202-818-00	SOLID	1K	20%	1/2W	
R504	1-202-525-00	SOLID	10	20%	1/2W	
R505	1-249-899-11	CARBON	100	5%	1/4W	F
R506	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R507	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R509	1-216-647-11	METAL CHIP	680	0.50%	1/10W	
R510	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R511	1-215-477-00	METAL	220K	1%	1/4W	
R514	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R515	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W	
R516	1-215-477-00	METAL	220K	1%	1/4W	
R517	1-249-440-11	CARBON	82K	5%	1/4W	
R518	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R519	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R520	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R521	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R522	1-216-689-11	METAL CHIP	39K	0.50%	1/10W	
R523	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R524	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R525	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R526	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R527	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R528	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R530	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W	
R531	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W	
R532	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R533	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R534	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R535	1-247-692-11	CARBON	22	5%	1/4W	F
R536	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R537	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R538	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R539	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R540	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R541	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R544	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R545	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	
R546	1-259-878-11	CARBON	1.5M	5%	1/4W	
R547	1-202-535-00	SOLID	27	20%	1/2W	
R548	1-202-535-00	SOLID	27	20%	1/2W	
R549	1-259-884-11	CARBON	4.7M	5%	1/4W	
R550	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R551	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R552	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R553	1-216-019-00	METAL GLAZE	56	5%	1/10W	

<VARIABLE RESISTOR>

☒RV501⚠	1-238-783-21	RES, ADJ, CERMET 500

<SPARK GAP>

SG501	1-519-063-XX	DISCHARGING GAP
SG502	1-519-063-XX	DISCHARGING GAP
SG503	1-519-063-XX	DISCHARGING GAP

****

*A-1335-064-A CAB BOARD, COMPLETE
****

<JACK>

CABJ1	*1-568-547-11	JACK, MINIATUER PIN

<CAPACITOR>

C800	1-128-589-11	ELECT CHIP	47MF	20%	6.3V
C801	1-104-607-11	ELECT CHIP	47MF	20%	16V
C802	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C803	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C804	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C805	1-128-589-11	ELECT CHIP	47MF	20%	6.3V
C806	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C807	1-104-607-11	ELECT CHIP	47MF	20%	16V
C808	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C809	1-163-038-91	CERAMIC CHIP	0.1MF		25V

- The components identified by ☒ in this manual have been carefully factory- selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

CAB

REF.NO.	PART NO.	DESCRIPTION		REMARK
C810	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C811	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C812	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C813	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C814	1-164-222-11	CERAMIC CHIP 0.22MF		25V
C815	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C816	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C817	1-135-091-91	TANTAL. CHIP 1MF	20%	16V
C818	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C819	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C820	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C821	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C822	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C823	1-135-091-91	TANTAL. CHIP 1MF	20%	16V
C824	1-135-091-91	TANTAL. CHIP 1MF	20%	16V
C825	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C826	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C827	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C828	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C829	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C830	1-135-091-91	TANTAL. CHIP 1MF	20%	16V
C831	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C832	1-135-092-21	TANTAL. CHIP 3.3MF	20%	16V
C833	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C834	1-135-091-91	TANTAL. CHIP 1MF	20%	16V
C835	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C836	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C837	1-163-235-11	CERAMIC CHIP 22PF	5%	50V
C838	1-163-091-00	CERAMIC CHIP 8PF	0.25PF	50V
C839	1-135-091-91	TANTAL. CHIP 1MF	20%	16V
C840	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C841	1-135-091-91	TANTAL. CHIP 1MF	20%	16V
C843	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C844	1-135-155-21	TANTAL. CHIP 4.7MF	20%	16V
C845	1-128-451-11	ELECT CHIP 22MF	20%	16V
C846	1-135-091-91	TANTAL. CHIP 1MF	20%	16V
C847	1-135-091-91	TANTAL. CHIP 1MF	20%	16V
C848	1-135-091-91	TANTAL. CHIP 1MF	20%	16V
C849	1-128-451-11	ELECT CHIP 22MF	20%	16V
C850	1-135-091-91	TANTAL. CHIP 1MF	20%	16V
C851	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C852	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C853	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C854	1-135-177-21	TANTAL. CHIP 1MF	20%	25V
C855	1-135-091-91	TANTAL. CHIP 1MF	20%	16V
C856	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C857	1-163-088-00	CERAMIC CHIP 5PF	0.25PF	50V
C858	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C859	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C860	1-135-091-91	TANTAL. CHIP 1MF	20%	16V
C861	1-135-091-91	TANTAL. CHIP 1MF	20%	16V
C862	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C863	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C864	1-128-451-11	ELECT CHIP 22MF	20%	16V
C865	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C866	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C867	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C868	1-128-451-11	ELECT CHIP 22MF	20%	16V
C869	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C870	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C871	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C872	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C877	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C885	1-128-451-11	ELECT CHIP 22MF	20%	16V
C887	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C888	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C889	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C890	1-163-229-11	CERAMIC CHIP 12PF	5%	50V
C893	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C894	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C901	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C902	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C903	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C904	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C905	1-164-222-11	CERAMIC CHIP 0.22MF		25V
C906	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C907	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C908	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C909	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C910	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C911	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C912	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C913	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C914	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C915	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C916	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C917	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C918	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C919	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C920	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C921	1-104-607-11	ELECT CHIP 47MF	20%	16V
C922	1-104-607-11	ELECT CHIP 47MF	20%	16V
C923	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C924	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C925	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C926	1-163-038-91	CERAMIC CHIP 0.1MF		25V

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION		REMARK
CN801	1-573-790-21	SOCKET, CONNECTOR 24P		
CN802	*1-774-252-11	CONNECTOR, BOARD TO BOARD 8P		
CN803	*1-774-252-11	CONNECTOR, BOARD TO BOARD 8P		

<DIODE>

REF.NO.	PART NO.	DESCRIPTION		REMARK
D800	8-719-801-78	DIODE 1SS184		
D801	8-719-801-78	DIODE 1SS184		
D802	8-719-800-76	DIODE 1SS226		
D803	8-719-105-91	DIODE RD5.6M-TIB2		
D804	8-719-801-78	DIODE 1SS184		
D805	8-719-800-76	DIODE 1SS226		
D806	8-719-106-80	DIODE RD13M-B2		
D807	8-719-800-76	DIODE 1SS226		
D808	8-719-801-78	DIODE 1SS184		
D810	8-719-104-34	DIODE 1S2836		
D811	8-719-801-78	DIODE 1SS184		
D812	8-719-801-78	DIODE 1SS184		
D813	8-719-801-78	DIODE 1SS184		
D825	8-719-801-78	DIODE 1SS184		
D826	8-719-801-78	DIODE 1SS184		

<FILTER>

REF.NO.	PART NO.	DESCRIPTION		REMARK
FL800	1-233-288-11	FILTER, EMI (SMD)		
FL801	1-233-283-11	FILTER, EMI (SMD)		
FL802	1-233-283-11	FILTER, EMI (SMD)		

REF.NO.	PART NO.	DESCRIPTION	REMARK
FL803	1-233-283-11	FILTER, EMI (SMD)	
FL804	1-233-283-11	FILTER, EMI (SMD)	
FL805	1-233-283-11	FILTER, EMI (SMD)	
FL806	1-233-288-11	FILTER, EMI (SMD)	
FL807	1-233-288-11	FILTER, EMI (SMD)	
FL808	1-233-288-11	FILTER, EMI (SMD)	
FL809	1-233-288-11	FILTER, EMI (SMD)	
FL810	1-233-288-11	FILTER, EMI (SMD)	
FL811	1-233-288-11	FILTER, EMI (SMD)	
FL812	1-233-283-11	FILTER, EMI (SMD)	
FL813	1-233-283-11	FILTER, EMI (SMD)	
FL814	1-233-283-11	FILTER, EMI (SMD)	
FL815	1-233-288-11	FILTER, EMI (SMD)	
FL816	1-233-288-11	FILTER, EMI (SMD)	
FL817	1-233-288-11	FILTER, EMI (SMD)	
FL818	1-233-288-11	FILTER, EMI (SMD)	
FL819	1-233-288-11	FILTER, EMI (SMD)	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC800	8-759-710-78	IC NJM082BM	
IC801	8-759-710-78	IC NJM082BM	
IC802	8-759-710-78	IC NJM082BM	
IC803	8-759-710-78	IC NJM082BM	
IC804	8-759-710-78	IC NJM082BM	
IC805	8-759-011-65	IC MC74HC4053F	
IC807	8-759-710-78	IC NJM082BM	
IC810	8-759-251-32	IC NJM4200M	

<CONDUCTOR CHIP>

REF.NO.	PART NO.	DESCRIPTION	REMARK
JC801	1-216-295-91	CONDUCTOR, CHIP	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q800	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q801	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q802	8-729-216-22	TRANSISTOR 2SA1162-G	
Q803	8-729-116-05	TRANSISTOR 2SK160-K5	
Q804	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q805	8-729-216-22	TRANSISTOR 2SA1162-G	
Q806	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q807	8-729-216-22	TRANSISTOR 2SA1162-G	
Q808	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q809	8-729-216-22	TRANSISTOR 2SA1162-G	
Q810	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q811	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q812	8-729-216-22	TRANSISTOR 2SA1162-G	
Q813	8-729-216-22	TRANSISTOR 2SA1162-G	
Q814	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q815	8-729-923-06	TRANSISTOR FMW-8	
Q816	8-729-923-06	TRANSISTOR FMW-8	
Q817	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q818	8-729-216-22	TRANSISTOR 2SA1162-G	
Q819	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q820	8-729-216-22	TRANSISTOR 2SA1162-G	
Q821	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q822	8-729-140-75	TRANSISTOR 2SD999-CLCK	
Q823	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q824	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q825	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q826	8-729-116-05	TRANSISTOR 2SK160-K5	
Q827	8-729-901-01	TRANSISTOR DTC144EK	
Q828	8-729-901-06	TRANSISTOR DTA144EK	

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q829	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q830	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q831	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q832	8-729-129-54	TRANSISTOR 2SC2954	
Q833	8-729-901-01	TRANSISTOR DTC144EK	
Q834	8-729-216-22	TRANSISTOR 2SA1162-G	
Q835	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q836	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q837	8-729-116-05	TRANSISTOR 2SK160-K5	
Q838	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q839	8-729-901-01	TRANSISTOR DTC144EK	
Q840	8-729-901-06	TRANSISTOR DTA144EK	
Q841	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q842	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q843	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q844	8-729-129-54	TRANSISTOR 2SC2954	
Q845	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q846	8-729-129-54	TRANSISTOR 2SC2954	
Q847	8-729-145-13	TRANSISTOR 2SC3356-(R25)	
Q848	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q849	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q850	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q851	8-729-143-43	TRANSISTOR 2SA1463IK	
Q861	8-729-901-01	TRANSISTOR DTC144EK	
Q901	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q902	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q903	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q904	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q905	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q906	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q907	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q908	8-729-116-05	TRANSISTOR 2SK160-K5	
Q909	8-729-923-06	TRANSISTOR FMW-8	
Q910	8-729-901-01	TRANSISTOR DTC144EK	
Q911	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q912	8-729-145-13	TRANSISTOR 2SC3356-(R25)	
Q913	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q914	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q915	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q916	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q917	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q918	8-729-216-22	TRANSISTOR 2SA1162-G	
Q919	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q921	8-729-230-49	TRANSISTOR 2SC2712-YG	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R800	1-216-631-11	METAL CHIP	150	0.50%	1/10W	
R802	1-216-631-11	METAL CHIP	150	0.50%	1/10W	
R804	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R805	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R806	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R807	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R808	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R809	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R810	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R811	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R812	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R813	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R814	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R815	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R816	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R817	1-216-017-91	METAL GLAZE	47	5%	1/10W	

CAB

REF.NO.	PART NO.	DESCRIPTION				REMARK
R818	1-216-611-11	METAL CHIP	22	0.50%	1/10W	
R819	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R820	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R821	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R822	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R823	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R824	1-216-019-00	METAL GLAZE	56	5%	1/10W	
R825	1-216-637-11	METAL CHIP	270	0.50%	1/10W	
R826	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R827	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R828	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R829	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R830	1-216-689-11	METAL CHIP	39K	0.50%	1/10W	
R831	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R832	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R833	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R834	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R835	1-216-009-00	METAL GLAZE	22	5%	1/10W	
R836	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R837	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R838	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R839	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R840	1-216-649-11	METAL CHIP	820	0.50%	1/10W	
R841	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R842	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R843	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R844	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R845	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R846	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R847	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R848	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R849	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R850	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R851	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R852	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R853	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R854	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R855	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R856	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R857	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R858	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R859	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R860	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R861	1-216-633-11	METAL CHIP	180	0.50%	1/10W	
R862	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R863	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R864	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R865	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R866	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R867	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R868	1-216-047-91	METAL GLAZE	820	5%	1/10W	
R869	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R870	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R871	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R872	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R873	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R874	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R875	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R876	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R877	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R878	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R879	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R880	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R881	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R882	1-216-635-11	METAL CHIP	220	0.50%	1/10W	
R883	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R884	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R886	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R887	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R888	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R889	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R890	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R891	1-216-639-11	METAL CHIP	330	0.50%	1/10W	
R892	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R893	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R895	1-216-641-11	METAL CHIP	390	0.50%	1/10W	
R896	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R897	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R898	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R899	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R900	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R902	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R903	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R904	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R905	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R906	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R907	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R908	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R909	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R910	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R911	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R912	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R913	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R914	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R915	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R916	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R917	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R918	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R919	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R920	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R921	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R922	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R923	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R924	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R925	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R926	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R927	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R928	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R929	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R930	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R931	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R932	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R933	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R934	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R935	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R936	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R937	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R938	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R939	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R940	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R941	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R942	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R943	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R944	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R945	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R946	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R947	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R948	1-216-699-11	METAL CHIP 100K 0.50% 1/10W	
R949	1-216-699-11	METAL CHIP 100K 0.50% 1/10W	
R950	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R951	1-216-687-11	METAL CHIP 33K 0.50% 1/10W	
R952	1-216-097-91	METAL GLAZE 100K 5% 1/10W	
R953	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R954	1-216-659-11	METAL CHIP 2.2K 0.50% 1/10W	
R955	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R956	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R957	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R958	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R959	1-208-784-11	METAL CHIP 1.2K 0.50% 1/10W	
R960	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R961	1-208-784-11	METAL CHIP 1.2K 0.50% 1/10W	
R962	1-216-021-00	METAL GLAZE 68 5% 1/10W	
R963	1-216-687-11	METAL CHIP 33K 0.50% 1/10W	
R964	1-216-013-00	METAL GLAZE 33 5% 1/10W	
R965	1-216-035-00	METAL GLAZE 270 5% 1/10W	
R966	1-216-623-11	METAL CHIP 68 0.50% 1/10W	
R967	1-216-631-11	METAL CHIP 150 0.50% 1/10W	
R968	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
R969	1-208-784-11	METAL CHIP 1.2K 0.50% 1/10W	
R970	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R971	1-216-671-11	METAL CHIP 6.8K 0.50% 1/10W	
R972	1-216-665-11	METAL CHIP 3.9K 0.50% 1/10W	
R973	1-216-639-11	METAL CHIP 330 0.50% 1/10W	
R974	1-216-639-11	METAL CHIP 330 0.50% 1/10W	
R975	1-216-659-11	METAL CHIP 2.2K 0.50% 1/10W	
R976	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R977	1-216-637-11	METAL CHIP 270 0.50% 1/10W	
R978	1-216-079-00	METAL GLAZE 18K 5% 1/10W	
R979	1-216-013-00	METAL GLAZE 33 5% 1/10W	
R980	1-216-013-00	METAL GLAZE 33 5% 1/10W	
R981	1-216-079-00	METAL GLAZE 18K 5% 1/10W	
R982	1-216-635-11	METAL CHIP 220 0.50% 1/10W	
R983	1-216-101-00	METAL GLAZE 150K 5% 1/10W	
R984	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
R985	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R986	1-216-635-11	METAL CHIP 220 0.50% 1/10W	
R987	1-216-657-11	METAL CHIP 1.8K 0.50% 1/10W	
R988	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R989	1-216-021-00	METAL GLAZE 68 5% 1/10W	
R990	1-216-079-00	METAL GLAZE 18K 5% 1/10W	
R991	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R992	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R993	1-216-121-91	METAL GLAZE 1M 5% 1/10W	
R994	1-216-013-00	METAL GLAZE 33 5% 1/10W	
R995	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R996	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R997	1-216-013-00	METAL GLAZE 33 5% 1/10W	
R998	1-216-095-00	METAL GLAZE 82K 5% 1/10W	
R999	1-216-097-91	METAL GLAZE 100K 5% 1/10W	
R1800	1-216-097-91	METAL GLAZE 100K 5% 1/10W	
R1801	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1802	1-216-657-11	METAL CHIP 1.8K 0.50% 1/10W	
R1803	1-216-645-11	METAL CHIP 560 0.50% 1/10W	
R1804	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R1806	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R1807	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1808	1-216-013-00	METAL GLAZE 33 5% 1/10W	
R1809	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R1810	1-216-019-00	METAL GLAZE 56 5% 1/10W	
R1811	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R1812	1-216-043-91	METAL GLAZE 560 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R1813	1-216-043-91	METAL GLAZE 560 5% 1/10W	
R1814	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R1815	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R1816	1-216-019-00	METAL GLAZE 56 5% 1/10W	
R1817	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1818	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1819	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R1820	1-216-035-00	METAL GLAZE 270 5% 1/10W	
R1821	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R1822	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R1823	1-216-019-00	METAL GLAZE 56 5% 1/10W	
R1824	1-216-013-00	METAL GLAZE 33 5% 1/10W	
R1825	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R1826	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R1827	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R1828	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1829	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R1830	1-216-659-11	METAL GLAZE 2.2K 5% 1/10W	
R1831	1-216-031-00	METAL GLAZE 180 5% 1/10W	
R1832	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R1833	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1834	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R1835	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R1836	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R1837	1-216-627-11	METAL GLAZE 100 5% 1/10W	
R1838	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R1839	1-216-049-91	METAL GLAZE 1K 5% 1/10W	

<VARIABLE RESISTOR>

RV801	1-230-870-11	RES, ADJ, METAL GLAZE 10K	

****

*A-1341-927-A DM BOARD, COMPLETE
****

<CAPACITOR>

C2	1-128-550-11	ELECT 2200MF 20% 50V	
C5	1-128-548-11	ELECT 4700MF 20% 25V	

<CONNECTOR>

CN1	*1-766-307-11	SOCKET, PC CONNECTOR 96P	
CN2	*1-766-307-11	SOCKET, PC CONNECTOR 96P	
CN3	*1-766-307-11	SOCKET, PC CONNECTOR 96P	
CN4	*1-766-307-11	SOCKET, PC CONNECTOR 96P	
CN5	*1-766-306-11	SOCKET, PC CONNECTOR 64P	
CN7	*1-564-515-11	PLUG, CONNECTOR 12P	
CN8	*1-564-514-11	PLUG, CONNECTOR 11P	
CN9	*1-564-507-11	PLUG, CONNECTOR 4P	
CN10	*1-564-513-11	PLUG, CONNECTOR 10P	
CN11	*1-564-507-11	PLUG, CONNECTOR 4P	
CN12	*1-564-506-11	PLUG, CONNECTOR 3P	
CN13	1-564-506-11	PLUG, CONNECTOR 3P	
CN14	*1-564-506-11	PLUG, CONNECTOR 3P	
CN15	*1-564-511-11	PLUG, CONNECTOR 8P	
CN16	*1-564-509-11	PLUG, CONNECTOR 6P	
CN18	1-506-348-XX	PIN, CONNECOTR 5P	
CN19	*1-506-348-XX	PIN, CONNECTOR 6P	
CN20	1-506-348-XX	PIN, CONNECTOR 4P	
CN21	1-506-348-XX	PIN, CONNECTOR 3P	
CN22	*1-564-507-11	PLUG, CONNECTOR 4P	

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN23	1-508-742-00	PIN, CONNECTOR 3P	
CN24	1-508-742-00	PIN, CONNECTOR 3P	
CN25	*1-564-514-11	PLUG, CONNECTOR 11P	
CN27	*1-564-507-11	PLUG, CONNECTOR 4P	
CN29	*1-564-516-11	PLUG, CONNECTOR 13P	
CN31	*1-564-516-11	PLUG, CONNECTOR 13P	
CN33	*1-766-307-11	SOCKET, PC CONNECTOR 96P	
CN34	*1-766-306-11	SOCKET, PC CONNECTOR 64P	
CN35	*1-564-507-11	PLUG, CONNECTOR 4P	
CN37	*1-564-507-11	PLUG, CONNECTOR 4P	
CN38	1-564-505-11	PLUG, CONNECTOR 2P	
CN40	1-508-742-00	PIN, CONNECTOR 3P	
CN41	1-508-742-00	PIN, CONNECTOR 3P	
CN42	1-508-742-00	PIN, CONNECTOR 3P	
CN43	*1-564-508-11	PLUG, CONNECTOR 5P	
CN44	*1-564-508-11	PLUG, CONNECTOR 5P	
CN45	*1-564-508-11	PLUG, CONNECTOR 5P	
CN46	*1-564-505-11	PLUG, CONNECTOR 2P	
CN47	*1-564-509-11	PLUG, CONNECTOR 6P	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L1	1-459-155-00	COIL (WITH CORE) 45UH	
L2	1-459-155-00	COIL (WITH CORE) 45UH	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R2	1-216-469-11	METAL OXIDE	12	5%	3W	F
R3	1-216-483-11	METAL OXIDE	2.7K	5%	3W	F
R4	1-216-483-11	METAL OXIDE	2.7K	5%	3W	F
R5	1-216-475-11	METAL OXIDE	120	5%	3W	F
R6	1-215-880-00	METAL OXIDE	10	5%	2W	F
R7	1-215-880-00	METAL OXIDE	10	5%	2W	F

* * *

***A-1341-934-A ED BOARD, COMPLETE**

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN120	*1-750-916-11	PIN, CONNECTOR(DY)(PC BOARD)8P	
CN121	*1-750-916-11	PIN, CONNECTOR(DY)(PC BOARD)8P	
CN122	*1-750-916-11	PIN, CONNECTOR(DY)(PC BOARD)8P	
CN123	*1-750-916-11	PIN, CONNECTOR(DY)(PC BOARD)8P	
CN124	*1-750-916-11	PIN, CONNECTOR(DY)(PC BOARD)8P	
CN125	*1-750-916-11	PIN, CONNECTOR(DY)(PC BOARD)8P	

* * *

***A-1341-935-A DG BOARD, COMPLETE**

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			
C1001	1-126-969-11	ELECT	220MF	20%	50V
C1002	1-126-969-11	ELECT	220MF	20%	50V
C1003	1-128-553-11	ELECT	220MF	20%	63V
C1004	1-128-553-11	ELECT	220MF	20%	63V
C1005	1-104-665-11	ELECT	100MF	20%	25V
C1006	1-104-665-11	ELECT	100MF	20%	25V
C1007	1-104-665-11	ELECT	100MF	20%	25V
C1008	1-104-665-11	ELECT	100MF	20%	25V
C1009	1-104-665-11	ELECT	100MF	20%	25V
C1010	1-104-665-11	ELECT	100MF	20%	25V

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN240	1-564-511-11	PLUG, CONNECTOR 8P	
CN241	1-564-511-11	PLUG, CONNECTOR 8P	
CN242	1-564-511-11	PLUG, CONNECTOR 8P	
CN243	*1-564-511-11	PLUG, CONNECTOR 8P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D1001	8-719-510-41	DIODE D10SC9M	
D1002	8-719-510-41	DIODE D10SC9M	
D1003	8-719-510-41	DIODE D10SC9M	
D1004	8-719-988-31	DIODE D10SC6MR	
D1005	8-719-988-31	DIODE D10SC6MR	
D1006	8-719-988-31	DIODE D10SC6MR	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q1001	8-729-033-29	TRANSISTOR 2SD1210(LK)-MT2	
Q1002	8-729-033-29	TRANSISTOR 2SD1210(LK)-MT2	
Q1003	8-729-033-29	TRANSISTOR 2SD1210(LK)-MT2	
Q1004	8-729-033-30	TRANSISTOR 2SB897(LK)-MT2	
Q1005	8-729-033-30	TRANSISTOR 2SB897(LK)-MT2	
Q1006	8-729-033-30	TRANSISTOR 2SB897(LK)-MT2	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION			
R1001	1-249-417-11	CARBON	1K	5%	1/4W
R1002	1-249-437-11	CARBON	47K	5%	1/4W
R1003	1-249-417-11	CARBON	1K	5%	1/4W
R1004	1-249-437-11	CARBON	47K	5%	1/4W
R1005	1-249-417-11	CARBON	1K	5%	1/4W
R1006	1-249-437-11	CARBON	47K	5%	1/4W
R1007	1-249-417-11	CARBON	1K	5%	1/4W
R1008	1-249-437-11	CARBON	47K	5%	1/4W
R1009	1-249-417-11	CARBON	1K	5%	1/4W
R1010	1-249-437-11	CARBON	47K	5%	1/4W
R1011	1-249-417-11	CARBON	1K	5%	1/4W
R1012	1-249-437-11	CARBON	47K	5%	1/4W

* * *

***A-1341-943-A EA BOARD, COMPLETE**

4-382-854-11 SCREW (M3X10), P, SW (+)

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			
C2015	1-126-928-11	ELECT	3300MF	20%	10V
C2016	1-126-928-11	ELECT	3300MF	20%	10V
C2017	1-107-646-91	ELECT	33MF	20%	200V
C2019	1-126-928-11	ELECT	3300MF	20%	10V
C2030	1-136-613-11	FILM	0.0068MF	3%	2KV
C2031	1-136-103-00	FILM	0.1MF	5%	200V
C2035	1-102-244-00	CERAMIC	220PF	10%	500V
C2130	1-104-665-11	ELECT	100MF	20%	25V
C2131	1-104-665-11	ELECT	100MF	20%	25V
C2132	1-123-024-21	ELECT	33MF		160V
C2140	1-136-169-00	FILM	0.22MF	5%	50V
C2172	1-126-964-11	ELECT	10MF	20%	50V
C2204	1-136-085-00	FILM	0.016MF	3%	2KV
C2300	1-126-964-11	ELECT	10MF	20%	50V
C2301	1-126-964-11	ELECT	10MF	20%	50V

EA **DD**

REF.NO.	PART NO.	DESCRIPTION				REMARK
C2302	1-126-964-11	ELECT	10MF	20%	50V	
C2303	1-126-964-11	ELECT	10MF	20%	50V	
C2304	1-126-964-11	ELECT	10MF	20%	50V	
C2305	1-126-964-11	ELECT	10MF	20%	50V	

<CONNECTOR>

CN140	*1-564-526-11	PLUG, CONNECTOR 11P
CN141	*1-564-520-11	PLUG, CONNECTOR 5P
CN142	*1-564-515-11	PLUG, CONNECTOR 12P
CN143	*1-564-513-11	PLUG, CONNECTOR 10P
CN144	*1-564-507-11	PLUG, CONNECTOR 4P
CN145	*1-564-509-11	PLUG, CONNECTOR 6P
CN146	*1-508-767-00	PIN, CONNECTOR (5MM PITCH) 5P

<DIODE>

D2003	8-719-901-19	DIODE V11N
D2007	8-719-054-86	DIODE ERC88M-009
D2008	8-719-054-86	DIODE ERC88M-009
D2009	8-719-979-58	DIODE EGP10D
D2010	8-719-979-58	DIODE EGP10D
D2012	8-719-979-58	DIODE EGP10D
D2013	8-719-945-81	DIODE ERC06-15SA
D2014	8-719-900-95	DIODE V09G
D2015	8-719-054-86	DIODE ERC88M-009

<FERRITE BEAD>

FB2004	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH
FB2005	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH

<COIL>

L2102	1-459-155-00	COIL (WITH CORE) 45UH

<TRANSISTOR>

Q2021	8-729-802-07	TRANSISTOR 2SD1403-CA
Q2022	8-729-119-80	TRANSISTOR 2SC2688-LK
Q2023	8-729-926-42	TRANSISTOR XDC114ES
Q2024	8-729-926-42	TRANSISTOR XDC114ES
Q2025	8-729-926-42	TRANSISTOR XDC114ES
Q2026	8-729-926-42	TRANSISTOR XDC114ES
Q2027	8-729-926-42	TRANSISTOR XDC114ES
Q2120	8-729-141-06	TRANSISTOR 2SA1142-QPE

<RESISTOR>

R2051	1-249-474-11	CARBON	1	5%	1/2W	F
R2052	1-249-474-11	CARBON	1	5%	1/2W	F
R2053	1-249-474-11	CARBON	1	5%	1/2W	F
R2054	1-215-857-11	METAL OXIDE	10	5%	1W	F
R2055	1-215-924-00	METAL OXIDE	15K	5%	3W	F
R2056	1-247-716-11	CARBON	1.8K	5%	1/4W	F
R2201	1-202-843-11	SOLID	270K	20%	1/2W	
R2202	1-202-843-11	SOLID	270K	20%	1/2W	
R2203	1-202-843-11	SOLID	270K	20%	1/2W	
R2204	1-202-843-11	SOLID	270K	20%	1/2W	
R2205	1-202-843-11	SOLID	270K	20%	1/2W	
R2206	1-202-843-11	SOLID	270K	20%	1/2W	
R2207	1-202-843-11	SOLID	270K	20%	1/2W	
R2208	1-202-843-11	SOLID	270K	20%	1/2W	
R2209	1-202-843-11	SOLID	270K	20%	1/2W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R2210	1-249-417-11	CARBON	1K	5%	1/4W	F
R2215	1-249-417-11	CARBON	1K	5%	1/4W	
R2216	1-249-423-11	CARBON	3.3K	5%	1/4W	
R2218	1-249-417-11	CARBON	1K	5%	1/4W	F
R2221	1-249-472-11	CARBON	0.68	5%	1/2W	F
R2222	1-249-441-11	CARBON	100K	5%	1/4W	
R2225	1-249-421-11	CARBON	2.2K	5%	1/4W	
R2305	1-249-417-11	CARBON	1K	5%	1/4W	
R2306	1-249-417-11	CARBON	1K	5%	1/4W	
R2307	1-249-417-11	CARBON	1K	5%	1/4W	
R2308	1-249-417-11	CARBON	1K	5%	1/4W	
R2309	1-249-417-11	CARBON	1K	5%	1/4W	
R2310	1-247-863-91	CARBON	22K	5%	1/4W	
R2311	1-247-863-91	CARBON	22K	5%	1/4W	
R2312	1-247-863-91	CARBON	22K	5%	1/4W	
R2313	1-247-863-91	CARBON	22K	5%	1/4W	
R2314	1-247-863-91	CARBON	22K	5%	1/4W	

<TRANSFORMER>

T2002	1-429-275-11	TRANSFORMER, FERRITE (LOT)
T2003	1-437-078-00	TRANSFORMER, HORIZONTAL DRIVE

****

	*A-1346-338-A	DD BOARD, COMPLETE ******************
	*4-395-527-01	HOLDER (B), TR
	4-874-042-00	SHEET, INSULATING

<CAPACITOR>

C1	1-136-165-00	FILM	0.1MF	5%	50V
C2	1-101-884-00	CERAMIC	56PF	5%	50V
C3	1-102-959-00	CERAMIC	22PF	5%	50V
C4	1-124-122-11	ELECT	100MF	20%	50V
C5	1-136-157-00	FILM	0.022MF	5%	50V
C6	1-136-111-00	FILM	1MF	5%	200V
C7	1-124-903-11	ELECT	1MF	20%	50V
C8	1-136-165-00	FILM	0.1MF	5%	50V
C9	1-136-165-00	FILM	0.1MF	5%	50V
C10	1-126-934-11	ELECT	220MF	20%	16V
C11	1-126-934-11	ELECT	220MF	20%	16V
C21	1-136-165-00	FILM	0.1MF	5%	50V
C22	1-101-884-00	CERAMIC	56PF	5%	50V
C23	1-102-959-00	CERAMIC	22PF	5%	50V
C24	1-124-122-11	ELECT	100MF	20%	50V
C25	1-136-157-00	FILM	0.022MF	5%	50V
C26	1-136-111-00	FILM	1MF	5%	200V
C27	1-124-903-11	ELECT	1MF	20%	50V
C28	1-136-165-00	FILM	0.1MF	5%	50V
C30	1-126-934-11	ELECT	220MF	20%	16V
C31	1-126-934-11	ELECT	220MF	20%	16V
C41	1-136-165-00	FILM	0.1MF	5%	50V
C42	1-101-884-00	CERAMIC	56PF	5%	50V
C43	1-102-959-00	CERAMIC	22PF	5%	50V
C44	1-124-122-11	ELECT	100MF	20%	50V
C45	1-136-157-00	FILM	0.022MF	5%	50V
C46	1-136-111-00	FILM	1MF	5%	200V
C47	1-124-903-11	ELECT	1MF	20%	50V
C48	1-136-165-00	FILM	0.1MF	5%	50V
C49	1-136-165-00	FILM	0.1MF	5%	50V
C50	1-126-934-11	ELECT	220MF	20%	16V
C51	1-126-934-11	ELECT	220MF	20%	16V
C61	1-124-903-11	ELECT	1MF	20%	50V

DD

REF.NO.	PART NO.	DESCRIPTION			REMARK
C62	1-136-173-00	FILM	0.47MF	5%	50V
C63	1-124-122-11	ELECT	100MF	20%	50V
C64	1-124-122-11	ELECT	100MF	20%	50V
C65	1-126-933-11	ELECT	100MF	20%	16V
C66	1-124-122-11	ELECT	100MF	20%	50V
C67	1-126-933-11	ELECT	100MF	20%	16V
C81	1-124-122-11	ELECT	100MF	20%	50V
C82	1-124-463-00	ELECT	0.1MF	20%	50V
C301	1-126-933-11	ELECT	100MF	20%	16V
C302	1-104-665-11	ELECT	100MF	20%	25V
C303	1-126-933-11	ELECT	100MF	20%	16V
C304	1-104-665-11	ELECT	100MF	20%	25V
C305	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C306	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C307	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C308	1-126-933-11	ELECT	100MF	20%	16V
C309	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C310	1-126-967-11	ELECT	47MF	20%	16V
C311	1-136-167-00	FILM	0.15MF	5%	50V
C312	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C313	1-126-933-11	ELECT	100MF	20%	16V
C314	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C315	1-136-167-00	FILM	0.15MF	5%	50V
C316	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C317	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C319	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C320	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C321	1-126-964-11	ELECT	10MF	20%	50V
C322	1-126-964-11	ELECT	10MF	20%	50V
C323	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C324	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C328	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C329	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C331	1-124-927-11	ELECT	4.7MF	20%	50V
C332	1-124-902-00	ELECT	0.47MF	20%	50V
C351	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C352	1-126-933-11	ELECT	100MF	20%	16V
C353	1-124-925-11	ELECT	2.2MF	20%	50V
C354	1-126-964-11	ELECT	10MF	20%	50V
C355	1-137-364-11	FILM	0.001MF	5%	50V
C356	1-126-964-11	ELECT	10MF	20%	50V
C357	1-137-368-11	FILM	0.0047MF	5%	50V
C358	1-126-933-11	ELECT	100MF	20%	16V
C359	1-126-964-11	ELECT	10MF	20%	50V
C360	1-124-927-11	ELECT	4.7MF	20%	50V
C361	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C362	1-163-031-11	CERAMIC CHIP	0.01MF		50V

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION
CN56	*1-766-304-11	PIN, PC CONNECTOR 64P
CN57	*1-564-519-11	PLUG, CONNECTOR 4P
CN58	*1-564-519-11	PLUG, CONNECTOR 4P
CN59	*1-564-519-11	PLUG, CONNECTOR 4P

<DIODE>

REF.NO.	PART NO.	DESCRIPTION
D1	8-719-900-95	DIODE V09G
D2	8-719-911-19	DIODE 1SS119-25
D21	8-719-900-95	DIODE V09G
D22	8-719-911-19	DIODE 1SS119-25
D41	8-719-900-95	DIODE V09G
D42	8-719-911-19	DIODE 1SS119-25
D61	8-719-911-19	DIODE 1SS119-25
D62	8-719-911-19	DIODE 1SS119-25
D63	8-719-911-19	DIODE 1SS119-25
D64	8-719-900-95	DIODE V09G
D65	8-719-900-95	DIODE V09G
D66	8-719-911-19	DIODE 1SS119-25
D67	8-719-109-81	DIODE RD4.7ESB2
D81	8-719-911-19	DIODE 1SS119-25
D301	8-719-900-95	DIODE V09G
D302	8-719-900-95	DIODE V09G
D303	8-719-801-78	DIODE 1SS184
D304	8-719-801-78	DIODE 1SS184
D305	8-719-801-78	DIODE 1SS184
D351	8-719-801-78	DIODE 1SS184
D352	8-719-801-78	DIODE 1SS184

<IC>

REF.NO.	PART NO.	DESCRIPTION
IC1	8-759-145-58	IC UPC4558C
IC2	8-759-113-13	IC UPC1498H
IC21	8-759-145-58	IC UPC4558C
IC22	8-759-113-13	IC UPC1498H
IC41	8-759-145-58	IC UPC4558C
IC42	8-759-113-13	IC UPC1498H
IC61	8-759-145-58	IC UPC4558C
IC62	8-759-701-79	IC NJM7812FA
IC63	8-759-929-65	IC LM7912CT
IC301	8-759-982-07	IC RC7808FA
IC302	8-759-990-36	IC RC7908FA
IC303	8-759-009-46	IC MC14528BF
IC304	8-759-114-06	IC UPC814G2-1
IC305	8-759-009-46	IC MC14528BF
IC306	8-759-100-96	IC UPC4558G2
IC351	8-759-300-78	IC HD14538BFP
IC352	8-759-114-06	IC UPC814G2-1

<CONDUCTOR CHIP>

REF.NO.	PART NO.	DESCRIPTION
JR1	1-216-295-91	CONDUCTOR, CHIP
JR2	1-216-296-91	CONDUCTOR, CHIP
JR3	1-216-295-91	CONDUCTOR, CHIP
JR4	1-216-295-91	CONDUCTOR, CHIP
JR5	1-216-295-91	CONDUCTOR, CHIP
JR6	1-216-296-91	CONDUCTOR, CHIP
JR7	1-216-295-91	CONDUCTOR, CHIP
JR8	1-216-295-91	CONDUCTOR, CHIP
JR9	1-216-296-91	CONDUCTOR, CHIP
JR10	1-216-295-91	CONDUCTOR, CHIP
JR11	1-216-295-91	CONDUCTOR, CHIP
JR12	1-216-296-91	CONDUCTOR, CHIP
JR13	1-216-295-91	CONDUCTOR, CHIP

<COIL>

REF.NO.	PART NO.	DESCRIPTION
L81	1-459-155-00	COIL (WITH CORE) 45UH

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION
Q1	8-729-926-78	TRANSISTOR IRFIBC30
Q2	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q21	8-729-926-78	TRANSISTOR IRFIBC30
Q22	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q41	8-729-926-78	TRANSISTOR IRFIBC30
Q42	8-729-119-78	TRANSISTOR 2SC2785-HFE

DD

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q61	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q62	8-729-900-89	TRANSISTOR DTC144ES	
Q63	8-729-900-89	TRANSISTOR DTC144ES	
Q64	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q81	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q82	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q83	8-729-900-89	TRANSISTOR DTC144ES	
Q300	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q301	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q302	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q303	8-729-216-22	TRANSISTOR 2SA1162-G	
Q304	8-729-216-22	TRANSISTOR 2SA1162-G	
Q305	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q306	8-729-216-22	TRANSISTOR 2SA1162-G	
Q307	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q308	8-729-216-22	TRANSISTOR 2SA1162-G	
Q351	8-729-901-01	TRANSISTOR DTC144EK	
Q352	8-729-216-22	TRANSISTOR 2SA1162-G	
Q353	8-729-216-22	TRANSISTOR 2SA1162-G	
Q354	8-729-230-49	TRANSISTOR 2SC2712-YG	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1	1-215-463-00	METAL	56K	1%	1/4W	
R2	1-215-445-00	METAL	10K	1%	1/4W	
R3	1-215-445-00	METAL	10K	1%	1/4W	
R4	1-215-463-00	METAL	56K	1%	1/4W	
R5	1-214-800-11	METAL	2.2	1%	1/2W	
R6	1-214-800-11	METAL	2.2	1%	1/2W	
R7	1-215-421-00	METAL	1K	1%	1/4W	
R8	1-215-429-00	METAL	2.2K	1%	1/4W	
R9	1-215-892-11	METAL OXIDE	1K	5%	2W	F
R10	1-249-423-11	CARBON	3.3K	5%	1/4W	
R11	1-247-863-91	CARBON	22K	5%	1/4W	
R12	1-249-417-11	CARBON	1K	5%	1/4W	
R13	1-249-441-11	CARBON	100K	5%	1/4W	
R14	1-249-429-11	CARBON	10K	5%	1/4W	
R15	1-249-429-11	CARBON	10K	5%	1/4W	
R16	1-249-429-11	CARBON	10K	5%	1/4W	
R21	1-215-463-00	METAL	56K	1%	1/4W	
R22	1-215-445-00	METAL	10K	1%	1/4W	
R23	1-215-445-00	METAL	10K	1%	1/4W	
R24	1-215-463-00	METAL	56K	1%	1/4W	
R25	1-214-800-11	METAL	2.2	1%	1/2W	
R26	1-214-800-11	METAL	2.2	1%	1/2W	
R27	1-215-421-00	METAL	1K	1%	1/4W	
R28	1-215-429-00	METAL	2.2K	1%	1/4W	
R29	1-215-892-11	METAL OXIDE	1K	5%	2W	F
R30	1-249-423-11	CARBON	3.3K	5%	1/4W	
R31	1-247-863-91	CARBON	22K	5%	1/4W	
R32	1-249-417-11	CARBON	1K	5%	1/4W	
R33	1-249-441-11	CARBON	100K	5%	1/4W	
R34	1-249-429-11	CARBON	10K	5%	1/4W	
R35	1-249-429-11	CARBON	10K	5%	1/4W	
R36	1-249-429-11	CARBON	10K	5%	1/4W	
R41	1-215-463-00	METAL	56K	1%	1/4W	
R42	1-215-445-00	METAL	10K	1%	1/4W	
R43	1-215-445-00	METAL	10K	1%	1/4W	
R44	1-215-463-00	METAL	56K	1%	1/4W	
R45	1-214-800-11	METAL	2.2	1%	1/2W	
R46	1-214-800-11	METAL	2.2	1%	1/2W	
R47	1-215-421-00	METAL	1K	1%	1/4W	
R48	1-215-429-00	METAL	2.2K	1%	1/4W	
R49	1-215-892-11	METAL OXIDE	1K	5%	2W	F
R50	1-249-423-11	CARBON	3.3K	5%	1/4W	
R51	1-247-863-91	CARBON	22K	5%	1/4W	
R52	1-249-417-11	CARBON	1K	5%	1/4W	
R53	1-249-441-11	CARBON	100K	5%	1/4W	
R54	1-249-429-11	CARBON	10K	5%	1/4W	
R55	1-249-429-11	CARBON	10K	5%	1/4W	
R56	1-249-429-11	CARBON	10K	5%	1/4W	
R61	1-249-417-11	CARBON	1K	5%	1/4W	
R62	1-249-417-11	CARBON	1K	5%	1/4W	
R63	1-249-437-11	CARBON	47K	5%	1/4W	
R64	1-247-863-91	CARBON	22K	5%	1/4W	
R65	1-247-863-91	CARBON	22K	5%	1/4W	
R66	1-249-429-11	CARBON	10K	5%	1/4W	
R67	1-249-429-11	CARBON	10K	5%	1/4W	
R68	1-249-429-11	CARBON	10K	5%	1/4W	
R69	1-249-429-11	CARBON	10K	5%	1/4W	
R70	1-249-425-11	CARBON	4.7K	5%	1/4W	
R71	1-249-417-11	CARBON	1K	5%	1/4W	
R72	1-249-429-11	CARBON	10K	5%	1/4W	
R73	1-249-422-11	CARBON	2.7K	5%	1/4W	
R81	1-249-429-11	CARBON	10K	5%	1/4W	
R82	1-249-429-11	CARBON	10K	5%	1/4W	
R83	1-249-421-11	CARBON	2.2K	5%	1/4W	
R84	1-249-437-11	CARBON	47K	5%	1/4W	
R85	1-249-417-11	CARBON	1K	5%	1/4W	
R301	1-215-864-00	METAL OXIDE	150	5%	1W	F
R303	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R304	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R305	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R306	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R307	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R308	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R310	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R311	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R312	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W	
R313	1-216-689-11	METAL CHIP	39K	0.50%	1/10W	
R314	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R315	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R316	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R317	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R318	1-216-603-11	METAL CHIP	10	0.50%	1/10W	
R319	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R321	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R322	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R323	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R324	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R325	1-218-760-11	METAL CHIP	220K	0.50%	1/10W	
R326	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R327	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R328	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R329	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R330	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R331	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R332	1-216-603-11	METAL CHIP	10	0.50%	1/10W	
R333	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R334	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R335	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R336	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R338	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R340	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R341	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R342	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R343	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R344	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	

DD **DB**

REF.NO.	PART NO.	DESCRIPTION	REMARK
R345	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R346	1-208-814-11	METAL CHIP 22K 0.50% 1/10W	
R347	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R348	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R349	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R351	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
R352	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
R353	1-218-756-11	METAL CHIP 150K 0.50% 1/10W	
R354	1-216-697-91	METAL CHIP 82K 0.50% 1/10W	
R355	1-216-699-11	METAL CHIP 100K 0.50% 1/10W	
R357	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
R358	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R359	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
R360	1-208-822-11	METAL CHIP 47K 0.50% 1/10W	
R361	1-216-699-11	METAL CHIP 100K 0.50% 1/10W	
R362	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R363	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R364	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R365	1-216-699-11	METAL CHIP 100K 0.50% 1/10W	
R367	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
R368	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R369	1-208-822-11	METAL CHIP 47K 0.50% 1/10W	
R370	1-208-822-11	METAL CHIP 47K 0.50% 1/10W	
R371	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R372	1-216-699-11	METAL CHIP 100K 0.50% 1/10W	
R373	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R374	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R375	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R376	1-216-699-11	METAL CHIP 100K 0.50% 1/10W	
R377	1-216-063-91	METAL GLAZE 3.9K 5% 1/10W	
R378	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R379	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R380	1-208-822-11	METAL CHIP 47K 0.50% 1/10W	
R381	1-208-800-11	METAL CHIP 5.6K 0.50% 1/10W	
R382	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	

<RELAY>

REF.NO.	PART NO.	DESCRIPTION	REMARK
RY81	1-515-716-11	RELAY (TQ2-5V)	
RY82	1-515-716-11	RELAY (TQ2-5V)	
RY83	1-515-716-11	RELAY (TQ2-5V)	

****

*A-1346-339-A DB BOARD, COMPLETE
****

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
C1501	1-126-935-11	ELECT 470MF 20% 16V	
C1502	1-126-935-11	ELECT 470MF 20% 16V	
C1505	1-126-933-11	ELECT 100MF 20% 16V	
C1506	1-126-933-11	ELECT 100MF 20% 16V	
C1507	1-126-967-11	ELECT 47MF 20% 16V	
C1508	1-163-243-11	CERAMIC CHIP 47PF 5% 50V	
C1509	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V	
C1510	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V	
C1511	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V	
C1512	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1513	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1514	1-126-967-11	ELECT 47MF 20% 16V	
C1515	1-126-933-11	ELECT 100MF 20% 16V	
C1516	1-126-933-11	ELECT 100MF 20% 16V	
C1517	1-124-122-11	ELECT 100MF 20% 50V	
C1518	1-124-122-11	ELECT 100MF 20% 50V	
C1519	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1520	1-126-933-11	ELECT 100MF 20% 16V	
C1521	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1522	1-128-257-21	ELECT CHIP 33MF 20% 10V	
C1523	1-128-257-21	ELECT CHIP 33MF 20% 10V	
C1524	1-128-257-21	ELECT CHIP 33MF 20% 10V	
C1600	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1601	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1602	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1603	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1604	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1605	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1606	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1607	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1608	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1609	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1610	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1611	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1612	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1613	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1614	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1615	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1616	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1617	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1618	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1619	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1620	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1621	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1622	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1623	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1624	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1625	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1626	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1627	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1628	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1629	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1630	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1631	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1632	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1633	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1634	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1635	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1636	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1637	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1638	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1639	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1640	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1641	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1642	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1643	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1644	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1645	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1646	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1647	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1648	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1649	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1650	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1651	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1652	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1653	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1654	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1655	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1656	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C1657	1-163-031-11	CERAMIC CHIP 0.01MF 50V	

REF.NO.	PART NO.	DESCRIPTION	REMARK
C1658	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C1659	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C1660	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C1661	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C1662	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C1663	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C1664	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C1665	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C1666	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C1667	1-163-031-11	CERAMIC CHIP 0.01MF	50V

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN54	*1-766-305-11	PIN, PC CONNECTOR 96P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D1501	8-719-900-95	DIODE V09G	
D1502	8-719-900-95	DIODE V09G	
D1503	8-719-800-76	DIODE 1SS226	
D1504	8-719-800-76	DIODE 1SS226	
D1505	8-719-800-76	DIODE 1SS226	
D1506	8-719-800-76	DIODE 1SS226	
D1507	8-719-800-76	DIODE 1SS226	
D1508	8-719-800-76	DIODE 1SS226	
D1509	8-719-911-19	DIODE 1SS119-25	
D1510	8-719-900-95	DIODE V09G	
D1511	8-719-900-95	DIODE V09G	
D1901	8-719-106-17	DIODE RD6.8M-B2	
D1902	8-719-106-17	DIODE RD6.8M-B2	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC1501	8-759-144-82	IC UPC2405HF	
IC1502	8-759-247-67	IC LM2990T-5.0	
IC1503	8-759-908-15	IC TL431CLP	
IC1504	8-759-926-67	IC SN74HC374ANS	
IC1505	8-759-926-48	IC SN74HC244ANS	
IC1506	8-759-926-48	IC SN74HC244ANS	
IC1507	8-759-926-48	IC SN74HC244ANS	
IC1508	8-759-925-74	IC SN74HC04ANS	
IC1509	8-759-287-83	IC SN74HC74ANS	
IC1510	8-759-925-76	IC SN74HC08ANS	
IC1511	8-759-239-23	IC TC74HC86AF	
IC1512	8-759-232-74	IC TC74HC163AF	
IC1513	8-759-256-59	IC HD74HC00FPEL	
IC1514	8-759-236-51	IC TC74HC165AF(EL)	
IC1515	8-759-236-51	IC TC74HC165AF(EL)	
IC1516	8-759-287-83	IC SN74HC74ANS	
IC1517	8-759-267-60	IC UPD74HC238GS-E2	
IC1518	8-759-267-60	IC UPD74HC238GS-E2	
IC1519	8-759-267-60	IC UPD74HC238GS-E2	
IC1520	8-759-326-65	IC MP7670AS-TE2	
IC1521	8-759-326-65	IC MP7670AS-TE2	
IC1522	8-759-326-65	IC MP7670AS-TE2	
IC1523	8-759-326-65	IC MP7670AS-TE2	
IC1524	8-759-326-65	IC MP7670AS-TE2	
IC1525	8-759-326-65	IC MP7670AS-TE2	
IC1526	8-759-326-65	IC MP7670AS-TE2	
IC1527	8-759-326-65	IC MP7670AS-TE2	
IC1528	8-759-326-65	IC MP7670AS-TE2	
IC1529	8-759-326-65	IC MP7670AS-TE2	
IC1530	8-759-326-65	IC MP7670AS-TE2	
IC1531	8-759-326-65	IC MP7670AS-TE2	
IC1532	8-759-326-65	IC MP7670AS-TE2	
IC1533	8-759-326-65	IC MP7670AS-TE2	
IC1534	8-759-326-65	IC MP7670AS-TE2	
IC1535	8-759-326-65	IC MP7670AS-TE2	
IC1536	8-759-326-65	IC MP7670AS-TE2	
IC1537	8-759-326-65	IC MP7670AS-TE2	
IC1538	8-759-984-88	IC LM6361M	
IC1539	8-759-984-88	IC LM6361M	
IC1540	8-759-984-88	IC LM6361M	
IC1541	8-759-984-88	IC LM6361M	
IC1542	8-759-984-88	IC LM6361M	
IC1543	8-759-984-88	IC LM6361M	
IC1544	8-759-100-96	IC UPC4558G2	
IC1545	8-759-100-96	IC UPC4558G2	
IC1546	8-759-231-58	IC TA7812S	
IC1547	8-759-700-69	IC NJM79L12A	
IC1548	8-759-042-02	IC S-80743AL-A7-S	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L1501	1-412-533-21	INDUCTOR 47UH	
L1502	1-412-533-21	INDUCTOR 47UH	
L1503	1-412-533-21	INDUCTOR 47UH	
L1504	1-412-533-21	INDUCTOR 47UH	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
R1501	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1502	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1503	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1504	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1505	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1506	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1507	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1508	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1509	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1510	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1511	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1512	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1513	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1514	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1515	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1516	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1517	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1518	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1519	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1520	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1521	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1522	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1523	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1524	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1525	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1526	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1527	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1528	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1529	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1530	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1531	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1532	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1533	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1534	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1535	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1536	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1537	1-216-659-11	METAL CHIP 2.2K 0.50% 1/10W	

DB

REF.NO.	PART NO.	DESCRIPTION	REMARK
R1538	1-216-659-11	METAL CHIP 2.2K 0.50% 1/10W	
R1539	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1540	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1541	1-216-021-00	METAL GLAZE 68 5% 1/10W	
R1600	1-216-611-11	METAL CHIP 22 0.50% 1/10W	
R1601	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1602	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1603	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1604	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1605	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1606	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1607	1-216-611-11	METAL CHIP 22 0.50% 1/10W	
R1608	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1609	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1610	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1611	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1612	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1613	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1614	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1615	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1616	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1617	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1618	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1619	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1620	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1621	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1622	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1624	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1625	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1626	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1627	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1628	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1629	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1630	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1631	1-216-611-11	METAL CHIP 22 0.50% 1/10W	
R1632	1-216-611-11	METAL CHIP 22 0.50% 1/10W	
R1633	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1634	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1700	1-208-784-11	METAL CHIP 1.2K 0.50% 1/10W	
R1701	1-208-784-11	METAL CHIP 1.2K 0.50% 1/10W	
R1702	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
R1703	1-208-784-11	METAL CHIP 1.2K 0.50% 1/10W	
R1704	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
R1705	1-216-671-11	METAL CHIP 6.8K 0.50% 1/10W	
R1706	1-216-671-11	METAL CHIP 6.8K 0.50% 1/10W	
R1707	1-216-671-11	METAL CHIP 6.8K 0.50% 1/10W	
R1708	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R1709	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R1710	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
R1711	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R1712	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
R1713	1-208-814-11	METAL CHIP 22K 0.50% 1/10W	
R1714	1-208-814-11	METAL CHIP 22K 0.50% 1/10W	
R1715	1-208-814-11	METAL CHIP 22K 0.50% 1/10W	
R1716	1-208-814-11	METAL CHIP 22K 0.50% 1/10W	
R1717	1-208-814-11	METAL CHIP 22K 0.50% 1/10W	
R1718	1-208-814-11	METAL CHIP 22K 0.50% 1/10W	
R1719	1-216-645-11	METAL CHIP 560 0.50% 1/10W	
R1720	1-216-645-11	METAL CHIP 560 0.50% 1/10W	
R1721	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R1722	1-216-661-11	METAL CHIP 2.7K 0.50% 1/10W	
R1723	1-216-661-11	METAL CHIP 2.7K 0.50% 1/10W	
R1724	1-216-661-11	METAL CHIP 2.7K 0.50% 1/10W	
R1725	1-216-673-11	METAL CHIP 8.2K 0.50% 1/10W	
R1726	1-216-673-11	METAL CHIP 8.2K 0.50% 1/10W	
R1727	1-216-673-11	METAL CHIP 8.2K 0.50% 1/10W	
R1728	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R1729	1-208-814-11	METAL CHIP 22K 0.50% 1/10W	
R1730	1-208-814-11	METAL CHIP 22K 0.50% 1/10W	
R1731	1-208-814-11	METAL CHIP 22K 0.50% 1/10W	
R1732	1-208-814-11	METAL CHIP 22K 0.50% 1/10W	
R1733	1-208-824-11	METAL CHIP 56K 0.50% 1/10W	
R1734	1-208-824-11	METAL CHIP 56K 0.50% 1/10W	
R1735	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
R1736	1-208-824-11	METAL CHIP 56K 0.50% 1/10W	
R1737	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
R1738	1-218-768-11	METAL CHIP 470K 0.50% 1/10W	
R1739	1-218-768-11	METAL CHIP 470K 0.50% 1/10W	
R1740	1-218-768-11	METAL CHIP 470K 0.50% 1/10W	
R1741	1-216-689-11	METAL CHIP 39K 0.50% 1/10W	
R1742	1-216-689-11	METAL CHIP 39K 0.50% 1/10W	
R1743	1-216-689-11	METAL CHIP 39K 0.50% 1/10W	
R1744	1-216-697-91	METAL CHIP 82K 0.50% 1/10W	
R1745	1-216-697-91	METAL CHIP 82K 0.50% 1/10W	
R1746	1-218-756-11	METAL CHIP 150K 0.50% 1/10W	
R1747	1-216-676-11	METAL CHIP 11K 0.50% 1/10W	
R1748	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R1749	1-216-676-11	METAL CHIP 11K 0.50% 1/10W	
R1750	1-216-676-11	METAL CHIP 11K 0.50% 1/10W	
R1751	1-216-697-91	METAL CHIP 82K 0.50% 1/10W	
R1752	1-216-697-91	METAL CHIP 82K 0.50% 1/10W	
R1753	1-218-756-11	METAL CHIP 150K 0.50% 1/10W	
R1754	1-218-772-11	METAL CHIP 680K 0.50% 1/10W	
R1755	1-218-764-11	METAL CHIP 330K 0.50% 1/10W	
R1756	1-218-764-11	METAL CHIP 330K 0.50% 1/10W	
R1757	1-218-764-11	METAL CHIP 330K 0.50% 1/10W	
R1758	1-218-772-11	METAL CHIP 680K 0.50% 1/10W	
R1759	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R1760	1-216-685-11	METAL CHIP 27K 0.50% 1/10W	
R1761	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R1762	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R1763	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R1764	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R1765	1-216-671-11	METAL CHIP 6.8K 0.50% 1/10W	
R1766	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R1767	1-216-671-11	METAL CHIP 6.8K 0.50% 1/10W	
R1768	1-216-671-11	METAL CHIP 6.8K 0.50% 1/10W	
R1769	1-216-671-11	METAL CHIP 6.8K 0.50% 1/10W	
R1770	1-216-671-11	METAL CHIP 6.8K 0.50% 1/10W	
R1771	1-216-685-11	METAL CHIP 27K 0.50% 1/10W	
R1772	1-216-685-11	METAL CHIP 27K 0.50% 1/10W	
R1773	1-208-822-11	METAL CHIP 47K 0.50% 1/10W	
R1774	1-208-822-11	METAL CHIP 47K 0.50% 1/10W	
R1775	1-208-822-11	METAL CHIP 47K 0.50% 1/10W	
R1776	1-208-822-11	METAL CHIP 47K 0.50% 1/10W	
R1777	1-208-822-11	METAL CHIP 47K 0.50% 1/10W	
R1778	1-208-822-11	METAL CHIP 47K 0.50% 1/10W	
R1779	1-208-822-11	METAL CHIP 47K 0.50% 1/10W	
R1780	1-208-822-11	METAL CHIP 47K 0.50% 1/10W	
R1781	1-208-822-11	METAL CHIP 47K 0.50% 1/10W	
R1782	1-208-822-11	METAL CHIP 47K 0.50% 1/10W	
R1786	1-208-822-11	METAL CHIP 47K 0.50% 1/10W	
R1790	1-208-822-11	METAL CHIP 47K 0.50% 1/10W	
R1791	1-208-822-11	METAL CHIP 47K 0.50% 1/10W	
R1792	1-208-822-11	METAL CHIP 47K 0.50% 1/10W	
R1793	1-208-822-11	METAL CHIP 47K 0.50% 1/10W	
R1794	1-208-822-11	METAL CHIP 47K 0.50% 1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1795	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1796	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1797	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1798	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1799	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1800	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1801	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1802	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1803	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1804	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1805	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1806	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1807	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R1808	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R1809	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R1810	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R1811	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R1812	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R1813	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R1814	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R1815	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R1816	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R1817	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R1818	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R1819	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1820	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1821	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1822	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1823	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1824	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1825	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1826	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1827	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1828	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1829	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1830	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1831	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1832	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1833	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1834	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1835	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1836	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1837	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1838	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1839	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1840	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1841	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1842	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1843	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1844	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1845	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1846	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1851	1-218-756-11	METAL CHIP	150K	0.50%	1/10W	
R1852	1-218-756-11	METAL CHIP	150K	0.50%	1/10W	
R1900	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R1901	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1902	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1903	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R1904	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1905	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1906	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R1907	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1908	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1909	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R1910	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1911	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1912	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R1913	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1914	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1915	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R1916	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1917	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1918	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1919	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R1920	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1921	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1922	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R1923	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1924	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1925	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R1926	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1928	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1929	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1930	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1931	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1932	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1933	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1934	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1935	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1936	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1937	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1938	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1939	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1940	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1941	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1942	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1943	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1944	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1945	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1946	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1947	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1948	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1949	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1950	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1951	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1952	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1953	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1954	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1955	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1956	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1957	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1958	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1959	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1960	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1961	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1962	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1963	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1964	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1965	1-216-073-00	METAL GLAZE	10K	5%	1/10W	

<CRYSTAL>

X1501	1-567-504-11	OSCILLATOR, CRYSTAL	

****

*A-1346-341-A EC BOARD, COMPLETE
****

EC

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
C201	1-124-122-11	ELECT 100MF 20%	50V
C202	1-124-122-11	ELECT 100MF 20%	50V
C203	1-126-157-11	ELECT 10MF 20%	16V
C204	1-126-157-11	ELECT 10MF 20%	16V
C205	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C206	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C209	1-128-551-11	ELECT 22MF 20%	25V
C210	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C301	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C302	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C303	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C304	1-163-025-11	CERAMIC CHIP 0.001MF	50V
C305	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C306	1-163-093-00	CERAMIC CHIP 10PF 5%	50V
C307	1-128-554-11	ELECT 330MF 20%	63V
C308	1-128-554-11	ELECT 330MF 20%	63V
C309	1-102-038-00	CERAMIC 0.001MF	500V
C351	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C352	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C353	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C354	1-163-025-11	CERAMIC CHIP 0.001MF	50V
C355	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C356	1-163-093-00	CERAMIC CHIP 10PF 5%	50V
C357	1-128-554-11	ELECT 330MF 20%	63V
C358	1-128-554-11	ELECT 330MF 20%	63V
C359	1-102-038-00	CERAMIC 0.001MF	500V
C401	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C402	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C403	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C404	1-163-025-11	CERAMIC CHIP 0.001MF	50V
C405	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C406	1-163-093-00	CERAMIC CHIP 10PF 5%	50V
C407	1-128-554-11	ELECT 330MF 20%	63V
C408	1-128-554-11	ELECT 330MF 20%	63V
C409	1-102-038-00	CERAMIC 0.001MF	500V
C451	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C452	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C453	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C454	1-163-025-11	CERAMIC CHIP 0.001MF	50V
C455	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C456	1-163-093-00	CERAMIC CHIP 10PF 5%	50V
C457	1-128-554-11	ELECT 330MF 20%	63V
C458	1-128-554-11	ELECT 330MF 20%	63V
C459	1-102-038-00	CERAMIC 0.001MF	500V
C501	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C502	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C503	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C504	1-163-025-11	CERAMIC CHIP 0.001MF	50V
C505	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C506	1-163-093-00	CERAMIC CHIP 10PF 5%	50V
C507	1-128-554-11	ELECT 330MF 20%	63V
C508	1-128-554-11	ELECT 330MF 20%	63V
C509	1-102-038-00	CERAMIC 0.001MF	500V
C551	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C552	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C553	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C554	1-163-025-11	CERAMIC CHIP 0.001MF	50V
C555	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C556	1-163-093-00	CERAMIC CHIP 10PF 5%	50V
C557	1-128-554-11	ELECT 330MF 20%	63V
C558	1-128-554-11	ELECT 330MF 20%	63V
C559	1-102-038-00	CERAMIC 0.001MF	500V

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN420	*1-564-507-11	PLUG, CONNECTOR 4P	
CN421	*1-564-508-11	PLUG, CONNECTOR 5P	
CN422	*1-564-507-11	PLUG, CONNECTOR 4P	
CN423	*1-564-508-11	PLUG, CONNECTOR 5P	
CN424	*1-564-507-11	PLUG, CONNECTOR 4P	
CN425	*1-564-508-11	PLUG, CONNECTOR 5P	
CN426	*1-564-509-11	PLUG, CONNECTOR 6P	
CN427	*1-564-505-11	PLUG, CONNECTOR 2P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D205	8-719-900-95	DIODE V09G	
D206	8-719-900-95	DIODE V09G	
D207	8-719-159-10	DIODE RD5.1SB-T2	
D208	8-719-801-78	DIODE 1SS184	
D209	8-719-801-78	DIODE 1SS184	
D301	8-719-801-78	DIODE 1SS184	
D302	8-719-911-19	DIODE 1SS119-25	
D351	8-719-801-78	DIODE 1SS184	
D352	8-719-911-19	DIODE 1SS119-25	
D401	8-719-801-78	DIODE 1SS184	
D402	8-719-911-19	DIODE 1SS119-25	
D451	8-719-801-78	DIODE 1SS184	
D452	8-719-911-19	DIODE 1SS119-25	
D501	8-719-801-78	DIODE 1SS184	
D502	8-719-911-19	DIODE 1SS119-25	
D551	8-719-801-78	DIODE 1SS184	
D552	8-719-911-19	DIODE 1SS119-25	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC201	8-759-231-58	IC TA7812S	
IC202	8-759-701-88	IC NJM7912FA	
IC203	8-759-105-49	IC UPC319G2	
IC301	8-759-114-06	IC UPC814G2-1	
IC351	8-759-114-06	IC UPC814G2-1	
IC401	8-759-114-06	IC UPC814G2-1	
IC451	8-759-114-06	IC UPC814G2-1	
IC501	8-759-114-06	IC UPC814G2-1	
IC551	8-759-114-06	IC UPC814G2-1	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L201	1-459-155-00	COIL (WITH CORE) 45UH	
L202	1-459-155-00	COIL (WITH CORE) 45UH	
L203	1-459-155-00	COIL (WITH CORE) 45UH	
L204	1-459-155-00	COIL (WITH CORE) 45UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q201	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q210	8-729-901-01	TRANSISTOR DTC144EK	
Q211	8-729-901-01	TRANSISTOR DTC144EK	
Q212	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q301	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q302	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q303	8-729-901-01	TRANSISTOR DTC144EK	
Q304	8-729-207-82	TRANSISTOR 2SC3421-Y	
Q305	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q306	8-729-033-01	TRANSISTOR 2SD1459	

EC

REF.NO.	PART NO.	DESCRIPTION				REMARK
Q307	8-729-805-98	TRANSISTOR 2SB1037-Q				
Q351	8-729-207-89	TRANSISTOR 2SA1358-Y				
Q352	8-729-207-89	TRANSISTOR 2SA1358-Y				
Q353	8-729-901-01	TRANSISTOR DTC144EK				
Q354	8-729-207-82	TRANSISTOR 2SC3421-Y				
Q355	8-729-207-89	TRANSISTOR 2SA1358-Y				
Q356	8-729-033-01	TRANSISTOR 2SD1459				
Q357	8-729-805-98	TRANSISTOR 2SB1037-Q				
Q401	8-729-207-89	TRANSISTOR 2SA1358-Y				
Q402	8-729-207-89	TRANSISTOR 2SA1358-Y				
Q403	8-729-901-01	TRANSISTOR DTC144EK				
Q404	8-729-207-82	TRANSISTOR 2SC3421-Y				
Q405	8-729-207-89	TRANSISTOR 2SA1358-Y				
Q406	8-729-033-01	TRANSISTOR 2SD1459				
Q407	8-729-805-98	TRANSISTOR 2SB1037-Q				
Q451	8-729-207-89	TRANSISTOR 2SA1358-Y				
Q452	8-729-207-89	TRANSISTOR 2SA1358-Y				
Q453	8-729-901-01	TRANSISTOR DTC144EK				
Q454	8-729-207-82	TRANSISTOR 2SC3421-Y				
Q455	8-729-207-89	TRANSISTOR 2SA1358-Y				
Q456	8-729-033-01	TRANSISTOR 2SD1459				
Q457	8-729-805-98	TRANSISTOR 2SB1037-Q				
Q501	8-729-207-89	TRANSISTOR 2SA1358-Y				
Q502	8-729-207-89	TRANSISTOR 2SA1358-Y				
Q503	8-729-901-01	TRANSISTOR DTC144EK				
Q504	8-729-207-82	TRANSISTOR 2SC3421-Y				
Q505	8-729-207-89	TRANSISTOR 2SA1358-Y				
Q506	8-729-033-01	TRANSISTOR 2SD1459				
Q507	8-729-805-98	TRANSISTOR 2SB1037-Q				
Q551	8-729-207-89	TRANSISTOR 2SA1358-Y				
Q552	8-729-207-89	TRANSISTOR 2SA1358-Y				
Q553	8-729-901-01	TRANSISTOR DTC144EK				
Q554	8-729-207-82	TRANSISTOR 2SC3421-Y				
Q555	8-729-207-89	TRANSISTOR 2SA1358-Y				
Q556	8-729-033-01	TRANSISTOR 2SD1459				
Q557	8-729-805-98	TRANSISTOR 2SB1037-Q				
		<RESISTOR>				
R201	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R202	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R203	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R204	1-249-417-11	CARBON	1K	5%	1/4W	
R205	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R206	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R207	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R208	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R209	1-249-417-11	CARBON	1K	5%	1/4W	
R210	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R224	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R225	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R226	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R227	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R228	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R229	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R301	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R302	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R303	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R304	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R305	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W	
R306	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R307	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R308	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R309	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R310	1-216-633-11	METAL CHIP	180	0.50%	1/10W	
R311	1-249-393-11	CARBON	10	5%	1/4W	F
R312	1-216-437-00	METAL OXIDE	5.6K	5%	1W	F
R313	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R314	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R315	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R316	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R317	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R318	1-247-688-11	CARBON	10	5%	1/4W	F
R319	1-247-688-11	CARBON	10	5%	1/4W	F
R320	1-216-378-11	METAL OXIDE	5.6	5%	2W	F
R321	1-249-389-11	CARBON	4.7	5%	1/4W	F
R322	1-249-389-11	CARBON	4.7	5%	1/4W	F
R323	1-249-393-11	CARBON	10	5%	1/4W	F
R324	1-215-916-00	METAL OXIDE	680	5%	3W	F
R325	1-215-916-00	METAL OXIDE	680	5%	3W	F
R326	1-247-731-11	CARBON	22	5%	1/2W	
R327	1-247-731-11	CARBON	22	5%	1/2W	
R351	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R352	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R353	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R354	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R355	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W	
R356	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R357	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R358	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R359	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R360	1-216-633-11	METAL CHIP	180	0.50%	1/10W	
R361	1-249-393-11	CARBON	10	5%	1/4W	F
R362	1-216-437-00	METAL OXIDE	5.6K	5%	1W	F
R363	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R364	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R365	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R366	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R367	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R368	1-247-688-11	CARBON	10	5%	1/4W	F
R369	1-247-688-11	CARBON	10	5%	1/4W	F
R370	1-216-378-11	METAL OXIDE	5.6	5%	2W	F
R371	1-249-389-11	CARBON	4.7	5%	1/4W	F
R372	1-249-389-11	CARBON	4.7	5%	1/4W	F
R373	1-249-393-11	CARBON	10	5%	1/4W	F
R374	1-215-916-00	METAL OXIDE	680	5%	3W	F
R375	1-215-916-00	METAL OXIDE	680	5%	3W	F
R401	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R402	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R403	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R404	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R405	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W	
R406	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R407	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R408	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R409	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R410	1-216-633-11	METAL CHIP	180	0.50%	1/10W	
R411	1-249-393-11	CARBON	10	5%	1/4W	F
R412	1-216-437-00	METAL OXIDE	5.6K	5%	1W	F
R413	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R414	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R415	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R416	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R417	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R418	1-247-688-11	CARBON	10	5%	1/4W	F
R419	1-247-688-11	CARBON	10	5%	1/4W	F
R420	1-216-378-11	METAL OXIDE	5.6	5%	2W	F

EC **DC**

REF.NO.	PART NO.	DESCRIPTION				REMARK
R421	1-249-389-11	CARBON	4.7	5%	1/4W	F
R422	1-249-389-11	CARBON	4.7	5%	1/4W	F
R423	1-249-393-11	CARBON	10	5%	1/4W	F
R424	1-215-916-00	METAL OXIDE	680	5%	3W	F
R425	1-215-916-00	METAL OXIDE	680	5%	3W	F
R426	1-247-731-11	CARBON	22	5%	1/2W	
R451	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R452	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R453	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R454	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R455	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W	
R456	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R457	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R458	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R459	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R460	1-216-633-11	METAL CHIP	180	0.50%	1/10W	
R461	1-249-393-11	CARBON	10	5%	1/4W	F
R462	1-216-437-00	METAL OXIDE	5.6K	5%	1W	F
R463	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R464	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R465	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R466	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R467	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R468	1-247-688-11	CARBON	10	5%	1/4W	F
R469	1-247-688-11	CARBON	10	5%	1/4W	F
R470	1-216-378-11	METAL OXIDE	5.6	5%	2W	F
R471	1-249-389-11	CARBON	4.7	5%	1/4W	F
R472	1-249-389-11	CARBON	4.7	5%	1/4W	F
R473	1-249-393-11	CARBON	10	5%	1/4W	F
R474	1-215-916-00	METAL OXIDE	680	5%	3W	F
R475	1-215-916-00	METAL OXIDE	680	5%	3W	F
R476	1-247-731-11	CARBON	22	5%	1/2W	
R501	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R502	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R503	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R504	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R505	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W	
R506	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R507	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R508	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R509	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R510	1-216-633-11	METAL CHIP	180	0.50%	1/10W	
R511	1-249-393-11	CARBON	10	5%	1/4W	F
R512	1-216-437-00	METAL OXIDE	5.6K	5%	1W	F
R513	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R514	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R515	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R516	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R517	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R518	1-247-688-11	CARBON	10	5%	1/4W	F
R519	1-247-688-11	CARBON	10	5%	1/4W	F
R520	1-216-378-11	METAL OXIDE	5.6	5%	2W	F
R521	1-249-389-11	CARBON	4.7	5%	1/4W	F
R522	1-249-389-11	CARBON	4.7	5%	1/4W	F
R523	1-249-393-11	CARBON	10	5%	1/4W	F
R524	1-215-916-00	METAL OXIDE	680	5%	3W	F
R525	1-215-916-00	METAL OXIDE	680	5%	3W	F
R526	1-247-731-11	CARBON	22	5%	1/2W	
R551	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R552	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R553	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R554	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R555	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W	
R556	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R557	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R558	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R559	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R560	1-216-633-11	METAL CHIP	180	0.50%	1/10W	
R561	1-249-393-11	CARBON	10	5%	1/4W	F
R562	1-216-437-00	METAL OXIDE	5.6K	5%	1W	F
R563	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R564	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R565	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R566	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R567	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R568	1-247-688-11	CARBON	10	5%	1/4W	F
R569	1-247-688-11	CARBON	10	5%	1/4W	F
R570	1-216-378-11	METAL OXIDE	5.6	5%	2W	F
R571	1-249-389-11	CARBON	4.7	5%	1/4W	F
R572	1-249-389-11	CARBON	4.7	5%	1/4W	F
R573	1-249-393-11	CARBON	10	5%	1/4W	F
R574	1-215-916-00	METAL OXIDE	680	5%	3W	F
R575	1-215-916-00	METAL OXIDE	680	5%	3W	F
R576	1-247-731-11	CARBON	22	5%	1/2W	

****

	*A-1346-342-A	DC BOARD, COMPLETE ****************** (DCA, DCC BOARD INCLUDING)				
	4-049-787-01	HOLDER (DC), TR				
		<CAPACITOR>				
C1	1-126-942-61	ELECT	1000MF	20%	25V	
C3	1-126-964-11	ELECT	10MF	20%	50V	
C4	1-126-967-11	ELECT	47MF	20%	50V	
C5	1-126-942-61	ELECT	1000MF	20%	25V	
C6	1-128-576-11	ELECT	100MF	20%	63V	
C7	1-102-050-00	CERAMIC	0.01MF	99%	500V	
C8	1-128-553-11	ELECT	220MF	20%	63V	
C9	1-124-122-11	ELECT	100MF	20%	50V	
C10	1-136-173-00	FILM	0.47MF	5%	50V	
C11	1-124-122-11	ELECT	100MF	20%	16V	
C12	1-128-576-11	ELECT	100MF	20%	63V	
C13	1-102-050-00	CERAMIC	0.01MF	99%	500V	
C14	1-128-553-11	ELECT	220MF	20%	63V	
C15	1-124-768-11	ELECT	4.7MF	20%	50V	
C16	1-124-122-11	ELECT	100MF	20%	50V	
C17	1-124-768-11	ELECT	4.7MF	20%	50V	
C18	1-124-122-11	ELECT	100MF	20%	50V	
C19	1-101-004-00	CERAMIC	0.01MF		50V	
C20	1-126-964-11	ELECT	10MF	20%	50V	
C21	1-126-967-11	ELECT	47MF	20%	50V	
C22	1-101-004-00	CERAMIC	0.01MF		50V	
C41	1-124-122-11	ELECT	100MF	20%	50V	
C42	1-126-943-11	ELECT	2200MF	20%	25V	
C50	1-136-165-00	FILM	0.1MF	5%	50V	
C51	1-101-004-00	CERAMIC	0.01MF		50V	
C52	1-101-004-00	CERAMIC	0.01MF		50V	
C60	1-136-165-00	FILM	0.1MF	5%	50V	
C62	1-101-004-00	CERAMIC	0.01MF		50V	
C70	1-128-576-11	ELECT	100MF	20%	63V	
C71	1-124-122-11	ELECT	100MF	20%	50V	
C72	1-101-004-00	CERAMIC	0.01MF		50V	
C73	1-124-122-11	ELECT	100MF	20%	50V	
C80	1-101-004-00	CERAMIC	0.01MF		50V	
C81	1-126-964-11	ELECT	10MF	20%	50V	

DC

REF.NO.	PART NO.	DESCRIPTION			REMARK
C101	1-128-552-51	ELECT	47MF	20%	63V
C102	1-128-552-51	ELECT	47MF	20%	63V
C103	1-128-552-51	ELECT	47MF	20%	63V
C104	1-128-552-51	ELECT	47MF	20%	63V
C105	1-128-552-51	ELECT	47MF	20%	63V
C106	1-128-552-51	ELECT	47MF	20%	63V
C211	1-124-122-11	ELECT	100MF	20%	50V
C212	1-124-122-11	ELECT	100MF	20%	50V
C213	1-124-122-11	ELECT	100MF	20%	50V
C214	1-124-122-11	ELECT	100MF	20%	50V
C215	1-124-122-11	ELECT	100MF	20%	50V
C216	1-124-122-11	ELECT	100MF	20%	50V
C217	1-128-552-51	ELECT	47MF	20%	63V
C218	1-128-552-51	ELECT	47MF	20%	63V
C219	1-128-552-51	ELECT	47MF	20%	63V
C220	1-128-552-51	ELECT	47MF	20%	63V
C221	1-128-552-51	ELECT	47MF	20%	63V
C222	1-128-552-51	ELECT	47MF	20%	63V
C231	1-137-408-91	FILM	470P	10%	100V
C232	1-137-408-91	FILM	470P	10%	100V
C233	1-137-408-91	FILM	470P	10%	100V
C234	1-137-408-91	FILM	470P	10%	100V
C235	1-137-408-91	FILM	470P	10%	100V
C236	1-137-408-91	FILM	470P	10%	100V
C302	1-102-973-00	CERAMIC	100PF	5%	50V
C303	1-137-368-11	FILM	0.0047MF	5%	50V
C304	1-102-050-00	CERAMIC	0.01MF	99%	500V
C305	1-124-915-11	ELECT	10MF	20%	63V
C306	1-124-903-11	ELECT	1MF	20%	50V
C307	1-137-368-11	FILM	0.0047MF	5%	50V
C308	1-102-973-00	CERAMIC	100PF	5%	50V
C309	1-102-050-00	CERAMIC	0.01MF	99%	500V
C310	1-124-915-11	ELECT	10MF	20%	63V
C311	1-124-903-11	ELECT	1MF	20%	50V
C312	1-137-368-11	FILM	0.0047MF	5%	50V
C313	1-102-973-00	CERAMIC	100PF	5%	50V
C314	1-124-903-11	ELECT	1MF	20%	50V
C315	1-124-915-11	ELECT	10MF	20%	63V
C316	1-102-050-00	CERAMIC	0.01MF	99%	500V
C317	1-124-915-11	ELECT	10MF	20%	63V
C318	1-102-050-00	CERAMIC	0.01MF	99%	500V
C319	1-124-915-11	ELECT	10MF	20%	63V
C320	1-102-050-00	CERAMIC	0.01MF	99%	500V
C321	1-124-915-11	ELECT	10MF	20%	63V
C322	1-102-050-00	CERAMIC	0.01MF	99%	500V
C323	1-102-316-00	CERAMIC	15PF	5%	500V
C324	1-102-316-00	CERAMIC	15PF	5%	500V
C325	1-102-316-00	CERAMIC	15PF	5%	500V
C331	1-124-122-11	ELECT	100MF	20%	50V
C332	1-124-122-11	ELECT	100MF	20%	50V
C341	1-124-122-11	ELECT	100MF	20%	50V
C342	1-124-122-11	ELECT	100MF	20%	50V
C351	1-124-122-11	ELECT	100MF	20%	50V
C352	1-124-122-11	ELECT	100MF	20%	50V
C380	1-126-942-61	ELECT	1000MF	20%	25V
C381	1-124-903-11	ELECT	1MF	20%	50V
C401	1-126-942-61	ELECT	1000MF	20%	25V
C403	1-137-368-11	FILM	0.0047MF	5%	50V
C404	1-102-973-00	CERAMIC	100PF	5%	50V
C405	1-124-903-11	ELECT	1MF	20%	50V
C406	1-124-915-11	ELECT	10MF	20%	63V
C407	1-102-050-00	CERAMIC	0.01MF	99%	500V
C408	1-137-368-11	FILM	0.0047MF	5%	50V
C409	1-102-973-00	CERAMIC	100PF	5%	50V

REF.NO.	PART NO.	DESCRIPTION			REMARK
C410	1-124-903-11	ELECT	1MF	20%	50V
C411	1-124-915-11	ELECT	10MF	20%	63V
C412	1-102-050-00	CERAMIC	0.01MF	99%	500V
C413	1-137-368-11	FILM	0.0047MF	5%	50V
C414	1-102-973-00	CERAMIC	100PF	5%	50V
C415	1-124-903-11	ELECT	1MF	20%	50V
C416	1-124-915-11	ELECT	10MF	20%	63V
C417	1-102-050-00	CERAMIC	0.01MF	99%	500V
C423	1-102-316-00	CERAMIC	15PF	5%	500V
C424	1-102-316-00	CERAMIC	15PF	5%	500V
C425	1-102-316-00	CERAMIC	15PF	5%	500V
C428	1-124-915-11	ELECT	10MF	20%	63V
C429	1-102-050-00	CERAMIC	0.01MF	99%	500V
C430	1-124-915-11	ELECT	10MF	20%	63V
C431	1-102-050-00	CERAMIC	0.01MF	99%	500V
C432	1-124-915-11	ELECT	10MF	20%	63V
C433	1-102-050-00	CERAMIC	0.01MF	99%	500V
C441	1-124-122-11	ELECT	100MF	20%	50V
C442	1-124-122-11	ELECT	100MF	20%	50V
C451	1-124-122-11	ELECT	100MF	20%	50V
C452	1-124-122-11	ELECT	100MF	20%	50V
C460	1-124-903-11	ELECT	1MF	20%	50V
C461	1-124-122-11	ELECT	100MF	20%	50V
C462	1-124-122-11	ELECT	100MF	20%	50V
C480	1-126-942-61	ELECT	1000MF	20%	25V
C481	1-124-903-11	ELECT	1MF	20%	50V

<CONNECTOR>

CN201	*1-564-514-11	PLUG, CONNECTOR 11P
CN202	*1-564-515-11	PLUG, CONNECTOR 12P
CN203	*1-564-508-11	PLUG, CONNECTOR 5P
CN204	*1-564-508-11	PLUG, CONNECTOR 5P
CN205	*1-564-508-11	PLUG, CONNECTOR 5P
CN206	1-508-742-00	PIN, CONNECTOR 3P
CN207	1-508-742-00	PIN, CONNECTOR 3P
CN208	1-508-742-00	PIN, CONNECTOR 3P
CN209	*1-564-507-11	PLUG, CONNECTOR 4P
CN210	*1-774-249-11	CONNECTOR, BOARD TO BOARD 10P
CN211	*1-774-249-11	CONNECTOR, BOARD TO BOARD 10P
CN212	*1-774-249-11	CONNECTOR, BOARD TO BOARD 10P
CN213	*1-774-249-11	CONNECTOR, BOARD TO BOARD 10P
CN214	*1-774-249-11	CONNECTOR, BOARD TO BOARD 10P
CN215	*1-774-249-11	CONNECTOR, BOARD TO BOARD 10P
CN216	*1-774-248-11	CONNECTOR, BOARD TO BOARD 8P
CN217	*1-774-248-11	CONNECTOR, BOARD TO BOARD 8P
CN218	*1-774-248-11	CONNECTOR, BOARD TO BOARD 8P
CN219	*1-774-248-11	CONNECTOR, BOARD TO BOARD 8P
CN220	*1-774-248-11	CONNECTOR, BOARD TO BOARD 8P
CN221	*1-774-248-11	CONNECTOR, BOARD TO BOARD 8P
CN222	1-564-505-11	PLUG, CONNECTOR 2P
CN223	1-564-505-11	PLUG, CONNECTOR 2P
CN224	*1-564-507-11	PLUG, CONNECTOR 4P
CN225	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P
CN228	1-564-511-11	PLUG, CONNECTOR 8P
CN229	1-564-511-11	PLUG, CONNECTOR 8P
CN230	1-564-511-11	PLUG, CONNECTOR 8P
CN231	*1-564-511-11	PLUG, CONNECTOR 8P

<DIODE>

D5	8-719-911-19	DIODE 1SS119-25
D8	8-719-911-19	DIODE 1SS119-25
D9	8-719-911-19	DIODE 1SS119-25

DC

REF.NO.	PART NO.	DESCRIPTION	REMARK
D10	8-719-911-19	DIODE 1SS119-25	
D11	8-719-911-19	DIODE 1SS119-25	
D12	8-719-911-19	DIODE 1SS119-25	
D13	8-719-911-19	DIODE 1SS119-25	
D14	8-719-109-72	DIODE RD3.9ESB2	
D15	8-719-109-72	DIODE RD3.9ESB2	
D16	8-719-911-19	DIODE 1SS119-25	
D41	8-719-911-19	DIODE 1SS119-25	
D50	8-719-911-19	DIODE 1SS119-25	
D51	8-719-109-72	DIODE RD3.9ESB2	
D60	8-719-911-19	DIODE 1SS119-25	
D61	8-719-110-17	DIODE RD10ESB2	
D71	8-719-911-19	DIODE 1SS119-25	
D81	8-719-109-81	DIODE RD4.7ESB2	
D82	8-719-911-19	DIODE 1SS119-25	
D101	8-719-110-17	DIODE RD10ESB2	
D102	8-719-110-17	DIODE RD10ESB2	
D103	8-719-110-17	DIODE RD10ESB2	
D104	8-719-110-17	DIODE RD10ESB2	
D105	8-719-110-17	DIODE RD10ESB2	
D106	8-719-110-17	DIODE RD10ESB2	
D111	8-719-300-80	DIODE RU-1C	
D112	8-719-300-80	DIODE RU-1C	
D113	8-719-300-80	DIODE RU-1C	
D114	8-719-300-80	DIODE RU-1C	
D115	8-719-300-80	DIODE RU-1C	
D116	8-719-300-80	DIODE RU-1C	
D201	8-719-110-17	DIODE RD10ESB2	
D202	8-719-110-17	DIODE RD10ESB2	
D203	8-719-110-17	DIODE RD10ESB2	
D204	8-719-110-17	DIODE RD10ESB2	
D205	8-719-110-17	DIODE RD10ESB2	
D206	8-719-110-17	DIODE RD10ESB2	
D211	8-719-300-80	DIODE RU-1C	
D212	8-719-300-80	DIODE RU-1C	
D213	8-719-300-80	DIODE RU-1C	
D214	8-719-300-80	DIODE RU-1C	
D215	8-719-300-80	DIODE RU-1C	
D216	8-719-300-80	DIODE RU-1C	
D217	8-719-300-80	DIODE RU-1C	
D218	8-719-300-80	DIODE RU-1C	
D219	8-719-300-80	DIODE RU-1C	
D220	8-719-300-80	DIODE RU-1C	
D221	8-719-300-80	DIODE RU-1C	
D222	8-719-300-80	DIODE RU-1C	
D231	8-719-300-80	DIODE RU-1C	
D232	8-719-300-80	DIODE RU-1C	
D233	8-719-300-80	DIODE RU-1C	
D234	8-719-300-80	DIODE RU-1C	
D235	8-719-300-80	DIODE RU-1C	
D236	8-719-300-80	DIODE RU-1C	
D302	8-719-911-19	DIODE 1SS119-25	
D303	8-719-911-19	DIODE 1SS119-25	
D306	8-719-109-66	DIODE RD3.3ESB2	
D307	8-719-110-78	DIODE RD33ESB2	
D308	8-719-911-19	DIODE 1SS119-25	
D309	8-719-911-19	DIODE 1SS119-25	
D312	8-719-109-66	DIODE RD3.3ESB2	
D313	8-719-110-78	DIODE RD33ESB2	
D314	8-719-911-19	DIODE 1SS119-25	
D315	8-719-911-19	DIODE 1SS119-25	
D318	8-719-109-66	DIODE RD3.3ESB2	
D319	8-719-110-78	DIODE RD33ESB2	
D403	8-719-911-19	DIODE 1SS119-25	

REF.NO.	PART NO.	DESCRIPTION	REMARK
D404	8-719-911-19	DIODE 1SS119-25	
D407	8-719-109-66	DIODE RD3.3ESB2	
D408	8-719-110-78	DIODE RD33ESB2	
D409	8-719-911-19	DIODE 1SS119-25	
D410	8-719-911-19	DIODE 1SS119-25	
D413	8-719-109-66	DIODE RD3.3ESB2	
D414	8-719-110-78	DIODE RD33ESB2	
D415	8-719-911-19	DIODE 1SS119-25	
D416	8-719-911-19	DIODE 1SS119-25	
D419	8-719-109-66	DIODE RD3.3ESB2	
D420	8-719-110-78	DIODE RD33ESB2	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC11	8-759-145-58	IC UPC4558C	
IC50	8-759-103-93	IC UPC393C	
IC70	8-759-103-93	IC UPC393C	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L1	1-406-975-21	COIL, CHOKE 47UH	
L2	1-406-975-21	COIL, CHOKE 47UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q1	8-729-033-71	TRANSISTOR 2SJ142	
Q2	8-729-207-82	TRANSISTOR 2SC3421-Y	
Q3	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q4	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q5	8-729-033-29	TRANSISTOR 2SD1210(LK)-MT2	
Q6	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q7	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q9	8-729-900-89	TRANSISTOR DTC144ES	
Q10	8-729-207-82	TRANSISTOR 2SC3421-Y	
Q11	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q12	8-729-900-89	TRANSISTOR DTC144ES	
Q13	8-729-900-89	TRANSISTOR DTC144ES	
Q101	8-729-111-07	TRANSISTOR 2SD1590-L	
Q102	8-729-111-11	TRANSISTOR 2SB1099-L	
Q103	8-729-111-07	TRANSISTOR 2SD1590-L	
Q104	8-729-111-11	TRANSISTOR 2SB1099-L	
Q105	8-729-111-07	TRANSISTOR 2SD1590-L	
Q106	8-729-111-11	TRANSISTOR 2SB1099-L	
Q301	8-729-900-89	TRANSISTOR DTC144ES	
Q302	8-729-142-70	TRANSISTOR 2SB1315	
Q303	8-729-142-74	TRANSISTOR 2SD1977	
Q304	8-729-822-47	TRANSISTOR 2SC3955-E	
Q305	8-729-823-07	TRANSISTOR 2SA1540-DE	
Q306	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q307	8-729-207-82	TRANSISTOR 2SC3421-Y	
Q308	8-729-142-70	TRANSISTOR 2SB1315	
Q309	8-729-142-74	TRANSISTOR 2SD1977	
Q310	8-729-822-47	TRANSISTOR 2SC3955-E	
Q311	8-729-823-07	TRANSISTOR 2SA1540-DE	
Q312	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q313	8-729-207-82	TRANSISTOR 2SC3421-Y	
Q314	8-729-142-70	TRANSISTOR 2SB1315	
Q315	8-729-142-74	TRANSISTOR 2SD1977	
Q316	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q317	8-729-207-82	TRANSISTOR 2SC3421-Y	
Q318	8-729-822-47	TRANSISTOR 2SC3955-E	
Q319	8-729-823-07	TRANSISTOR 2SA1540-DE	
Q401	8-729-900-89	TRANSISTOR DTC144ES	
Q403	8-729-900-89	TRANSISTOR DTC144ES	

DC

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q405	8-729-142-70	TRANSISTOR 2SB1315	
Q406	8-729-142-74	TRANSISTOR 2SD1977	
Q407	8-729-822-47	TRANSISTOR 2SC3955-E	
Q408	8-729-823-07	TRANSISTOR 2SA1540-DE	
Q409	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q410	8-729-207-82	TRANSISTOR 2SC3421-Y	
Q411	8-729-142-70	TRANSISTOR 2SB1315	
Q412	8-729-142-74	TRANSISTOR 2SD1977	
Q413	8-729-822-47	TRANSISTOR 2SC3955-E	
Q414	8-729-823-07	TRANSISTOR 2SA1540-DE	
Q415	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q416	8-729-207-82	TRANSISTOR 2SC3421-Y	
Q417	8-729-142-70	TRANSISTOR 2SB1315	
Q418	8-729-142-74	TRANSISTOR 2SD1977	
Q419	8-729-822-47	TRANSISTOR 2SC3955-E	
Q420	8-729-823-07	TRANSISTOR 2SA1540-DE	
Q421	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q422	8-729-207-82	TRANSISTOR 2SC3421-Y	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R3	1-249-429-11	CARBON	10K	5%	1/4W	
R4	1-216-387-11	METAL OXIDE	0.68	5%	3W	F
R5	1-216-387-11	METAL OXIDE	0.68	5%	3W	F
R6	1-249-393-11	CARBON	10	5%	1/4W	
R10	1-249-429-11	CARBON	10K	5%	1/4W	
R11	1-247-899-11	CARBON	680K	5%	1/4W	
R12	1-249-441-11	CARBON	100K	5%	1/4W	
R13	1-249-429-11	CARBON	10K	5%	1/4W	
R14	1-249-393-11	CARBON	10	5%	1/4W	
R15	1-249-429-11	CARBON	10K	5%	1/4W	
R16	1-216-387-11	METAL OXIDE	0.68	5%	3W	F
R17	1-216-387-11	METAL OXIDE	0.68	5%	3W	F
R18	1-249-429-11	CARBON	10K	5%	1/4W	
R19	1-249-429-11	CARBON	10K	5%	1/4W	
R20	1-247-899-11	CARBON	680K	5%	1/4W	
R21	1-247-899-11	CARBON	680K	5%	1/4W	
R22	1-249-441-11	CARBON	100K	5%	1/4W	
R23	1-249-426-11	CARBON	5.6K	5%	1/4W	
R24	1-249-429-11	CARBON	10K	5%	1/4W	
R25	1-249-393-11	CARBON	10	5%	1/4W	
R26	1-216-383-11	METAL OXIDE	0.33	5%	3W	F
R27	1-216-383-11	METAL OXIDE	0.33	5%	3W	F
R28	1-249-429-11	CARBON	10K	5%	1/4W	
R29	1-249-417-11	CARBON	1K	5%	1/4W	
R30	1-249-425-11	CARBON	4.7K	5%	1/4W	
R31	1-249-429-11	CARBON	10K	5%	1/4W	
R32	1-249-429-11	CARBON	10K	5%	1/4W	
R33	1-249-437-11	CARBON	47K	5%	1/4W	
R34	1-249-429-11	CARBON	10K	5%	1/4W	
R35	1-249-424-11	CARBON	3.9K	5%	1/4W	
R36	1-249-437-11	CARBON	47K	5%	1/4W	
R37	1-247-899-11	CARBON	680K	5%	1/4W	
R38	1-249-424-11	CARBON	3.9K	5%	1/4W	
R40	1-249-421-11	CARBON	2.2K	5%	1/4W	
R41	1-249-441-11	CARBON	100K	5%	1/4W	
R42	1-249-393-11	CARBON	10	5%	1/4W	
R43	1-249-429-11	CARBON	10K	5%	1/4W	
R44	1-216-383-11	METAL OXIDE	0.33	5%	3W	F
R45	1-216-383-11	METAL OXIDE	0.33	5%	3W	F
R46	1-247-807-31	CARBON	100	5%	1/4W	
R50	1-247-881-00	CARBON	120K	5%	1/4W	
R51	1-249-431-11	CARBON	15K	5%	1/4W	
R52	1-249-421-11	CARBON	2.2K	5%	1/4W	
R53	1-249-417-11	CARBON	1K	5%	1/4W	
R54	1-249-417-11	CARBON	1K	5%	1/4W	
R55	1-249-429-11	CARBON	10K	5%	1/4W	
R56	1-249-422-11	CARBON	2.7K	5%	1/4W	
R60	1-247-887-00	CARBON	220K	5%	1/4W	
R61	1-249-434-11	CARBON	27K	5%	1/4W	
R62	1-249-417-11	CARBON	1K	5%	1/4W	
R63	1-249-417-11	CARBON	1K	5%	1/4W	
R64	1-249-417-11	CARBON	1K	5%	1/4W	
R65	1-249-429-11	CARBON	10K	5%	1/4W	
R66	1-249-422-11	CARBON	2.7K	5%	1/4W	
R71	1-249-435-11	CARBON	33K	5%	1/4W	
R72	1-247-883-00	CARBON	150K	5%	1/4W	
R73	1-249-441-11	CARBON	100K	5%	1/4W	
R74	1-249-429-11	CARBON	10K	5%	1/4W	
R75	1-249-417-11	CARBON	1K	5%	1/4W	
R76	1-249-417-11	CARBON	1K	5%	1/4W	
R77	1-249-426-11	CARBON	5.6K	5%	1/4W	
R78	1-249-428-11	CARBON	8.2K	5%	1/4W	
R79	1-249-425-11	CARBON	4.7K	5%	1/4W	
R80	1-249-430-11	CARBON	12K	5%	1/4W	
R81	1-247-807-31	CARBON	100	5%	1/4W	
R82	1-249-429-11	CARBON	10K	5%	1/4W	
R83	1-249-425-11	CARBON	4.7K	5%	1/4W	
R84	1-249-429-11	CARBON	10K	5%	1/4W	
R85	1-249-425-11	CARBON	4.7K	5%	1/4W	
R86	1-249-417-11	CARBON	1K	5%	1/4W	
R87	1-249-417-11	CARBON	1K	5%	1/4W	
R88	1-249-420-11	CARBON	1.8K	5%	1/4W	
R89	1-247-899-11	CARBON	680K	5%	1/4W	
R101	1-215-873-00	METAL OXIDE	4.7K	5%	1W	F
R102	1-215-873-00	METAL OXIDE	4.7K	5%	1W	F
R103	1-215-873-00	METAL OXIDE	4.7K	5%	1W	F
R104	1-215-873-00	METAL OXIDE	4.7K	5%	1W	F
R105	1-215-873-00	METAL OXIDE	4.7K	5%	1W	F
R106	1-215-873-00	METAL OXIDE	4.7K	5%	1W	F
R107	1-249-413-11	CARBON	470	5%	1/4W	
R108	1-249-413-11	CARBON	470	5%	1/4W	
R109	1-249-413-11	CARBON	470	5%	1/4W	
R110	1-249-413-11	CARBON	470	5%	1/4W	
R111	1-249-413-11	CARBON	470	5%	1/4W	
R112	1-249-413-11	CARBON	470	5%	1/4W	
R201	1-215-873-00	METAL OXIDE	4.7K	5%	1W	F
R202	1-215-873-00	METAL OXIDE	4.7K	5%	1W	F
R203	1-215-873-00	METAL OXIDE	4.7K	5%	1W	F
R204	1-215-873-00	METAL OXIDE	4.7K	5%	1W	F
R205	1-215-873-00	METAL OXIDE	4.7K	5%	1W	F
R206	1-215-873-00	METAL OXIDE	4.7K	5%	1W	F
R207	1-249-417-11	CARBON	1K	5%	1/4W	
R208	1-249-437-11	CARBON	47K	5%	1/4W	
R209	1-249-417-11	CARBON	1K	5%	1/4W	
R210	1-249-437-11	CARBON	47K	5%	1/4W	
R211	1-249-417-11	CARBON	1K	5%	1/4W	
R212	1-249-437-11	CARBON	47K	5%	1/4W	
R213	1-249-417-11	CARBON	1K	5%	1/4W	
R214	1-249-437-11	CARBON	47K	5%	1/4W	
R215	1-249-417-11	CARBON	1K	5%	1/4W	
R216	1-249-437-11	CARBON	47K	5%	1/4W	
R217	1-249-417-11	CARBON	1K	5%	1/4W	
R218	1-249-437-11	CARBON	47K	5%	1/4W	
R301	1-216-383-11	METAL OXIDE	0.33	5%	3W	F
R302	1-216-383-11	METAL OXIDE	0.33	5%	3W	F
R303	1-216-475-11	METAL OXIDE	120	5%	3W	F

DC

REF.NO.	PART NO.	DESCRIPTION				REMARK
R304	1-216-381-11	METAL OXIDE	0.22	5%	3W	F
R305	1-216-381-11	METAL OXIDE	0.22	5%	3W	F
R306	1-247-807-31	CARBON	100	5%	1/4W	
R307	1-249-393-11	CARBON	10	5%	1/4W	
R308	1-249-393-11	CARBON	10	5%	1/4W	
R309	1-247-807-31	CARBON	100	5%	1/4W	
R310	1-247-807-31	CARBON	100	5%	1/4W	
R311	1-247-807-31	CARBON	100	5%	1/4W	
R312	1-247-807-31	CARBON	100	5%	1/4W	
R313	1-247-807-31	CARBON	100	5%	1/4W	
R314	1-247-815-91	CARBON	220	5%	1/4W	
R315	1-249-405-11	CARBON	100	5%	1/4W	F
R316	1-247-807-31	CARBON	100	5%	1/4W	
R317	1-247-807-31	CARBON	100	5%	1/4W	
R318	1-249-426-11	CARBON	5.6K	5%	1/4W	
R319	1-249-415-11	CARBON	680	5%	1/4W	F
R320	1-249-427-11	CARBON	6.8K	5%	1/4W	
R321	1-216-383-11	METAL OXIDE	0.33	5%	3W	F
R322	1-216-383-11	METAL OXIDE	0.33	5%	3W	F
R323	1-216-475-11	METAL OXIDE	120	5%	3W	F
R324	1-216-381-11	METAL OXIDE	0.22	5%	3W	F
R325	1-216-381-11	METAL OXIDE	0.22	5%	3W	F
R326	1-247-807-31	CARBON	100	5%	1/4W	
R327	1-249-393-11	CARBON	10	5%	1/4W	
R328	1-249-393-11	CARBON	10	5%	1/4W	
R329	1-247-807-31	CARBON	100	5%	1/4W	
R330	1-247-807-31	CARBON	100	5%	1/4W	
R331	1-247-807-31	CARBON	100	5%	1/4W	
R332	1-247-807-31	CARBON	100	5%	1/4W	
R333	1-247-807-31	CARBON	100	5%	1/4W	
R334	1-247-815-91	CARBON	220	5%	1/4W	
R335	1-249-405-11	CARBON	100	5%	1/4W	F
R336	1-247-807-31	CARBON	100	5%	1/4W	
R337	1-247-807-31	CARBON	100	5%	1/4W	
R338	1-249-426-11	CARBON	5.6K	5%	1/4W	
R339	1-249-415-11	CARBON	680	5%	1/4W	F
R340	1-249-427-11	CARBON	6.8K	5%	1/4W	
R341	1-216-383-11	METAL OXIDE	0.33	5%	3W	F
R342	1-216-383-11	METAL OXIDE	0.33	5%	3W	F
R343	1-216-475-11	METAL OXIDE	120	5%	3W	F
R344	1-216-381-11	METAL OXIDE	0.22	5%	3W	F
R345	1-216-381-11	METAL OXIDE	0.22	5%	3W	F
R346	1-247-807-31	CARBON	100	5%	1/4W	
R347	1-249-393-11	CARBON	10	5%	1/4W	
R348	1-249-393-11	CARBON	10	5%	1/4W	
R349	1-247-807-31	CARBON	100	5%	1/4W	
R350	1-247-807-31	CARBON	100	5%	1/4W	
R351	1-247-807-31	CARBON	100	5%	1/4W	
R352	1-247-807-31	CARBON	100	5%	1/4W	
R353	1-247-807-31	CARBON	100	5%	1/4W	
R354	1-247-815-91	CARBON	220	5%	1/4W	
R355	1-249-405-11	CARBON	100	5%	1/4W	F
R356	1-247-807-31	CARBON	100	5%	1/4W	
R357	1-247-807-31	CARBON	100	5%	1/4W	
R358	1-249-426-11	CARBON	5.6K	5%	1/4W	
R359	1-249-415-11	CARBON	680	5%	1/4W	F
R370	1-249-427-11	CARBON	6.8K	5%	1/4W	
R380	1-215-882-00	METAL OXIDE	22	5%	2W	F
R381	1-247-807-31	CARBON	100	5%	1/4W	
R382	1-247-863-91	CARBON	22K	5%	1/4W	
R383	1-249-417-11	CARBON	1K	5%	1/4W	
R401	1-216-383-11	METAL OXIDE	0.33	5%	3W	F
R402	1-216-383-11	METAL OXIDE	0.33	5%	3W	F
R403	1-216-475-11	METAL OXIDE	120	5%	3W	F

REF.NO.	PART NO.	DESCRIPTION				REMARK
R404	1-216-381-11	METAL OXIDE	0.22	5%	3W	F
R405	1-216-381-11	METAL OXIDE	0.22	5%	3W	F
R406	1-247-807-31	CARBON	100	5%	1/4W	
R407	1-249-393-11	CARBON	10	5%	1/4W	
R408	1-249-393-11	CARBON	10	5%	1/4W	
R409	1-247-807-31	CARBON	100	5%	1/4W	
R410	1-247-807-31	CARBON	100	5%	1/4W	
R411	1-247-807-31	CARBON	100	5%	1/4W	
R412	1-247-807-31	CARBON	100	5%	1/4W	
R413	1-247-807-31	CARBON	100	5%	1/4W	
R414	1-247-815-91	CARBON	220	5%	1/4W	
R415	1-249-405-11	CARBON	100	5%	1/4W	F
R416	1-247-807-31	CARBON	100	5%	1/4W	
R417	1-247-807-31	CARBON	100	5%	1/4W	
R418	1-249-426-11	CARBON	5.6K	5%	1/4W	
R419	1-249-415-11	CARBON	680	5%	1/4W	F
R420	1-249-427-11	CARBON	6.8K	5%	1/4W	
R421	1-216-383-11	METAL OXIDE	0.33	5%	3W	F
R422	1-216-383-11	METAL OXIDE	0.33	5%	3W	F
R423	1-216-475-11	METAL OXIDE	120	5%	3W	F
R424	1-216-381-11	METAL OXIDE	0.22	5%	3W	F
R425	1-216-381-11	METAL OXIDE	0.22	5%	3W	F
R426	1-247-807-31	CARBON	100	5%	1/4W	
R427	1-249-393-11	CARBON	10	5%	1/4W	
R428	1-249-393-11	CARBON	10	5%	1/4W	
R429	1-247-807-31	CARBON	100	5%	1/4W	
R430	1-247-807-31	CARBON	100	5%	1/4W	
R431	1-247-807-31	CARBON	100	5%	1/4W	
R432	1-247-807-31	CARBON	100	5%	1/4W	
R433	1-247-807-31	CARBON	100	5%	1/4W	
R434	1-247-815-91	CARBON	220	5%	1/4W	
R435	1-249-405-11	CARBON	100	5%	1/4W	F
R436	1-247-807-31	CARBON	100	5%	1/4W	
R437	1-247-807-31	CARBON	100	5%	1/4W	
R438	1-249-426-11	CARBON	5.6K	5%	1/4W	
R439	1-249-415-11	CARBON	680	5%	1/4W	F
R440	1-249-427-11	CARBON	6.8K	5%	1/4W	
R441	1-216-383-11	METAL OXIDE	0.33	5%	3W	F
R442	1-216-383-11	METAL OXIDE	0.33	5%	3W	F
R443	1-216-475-11	METAL OXIDE	120	5%	3W	F
R444	1-216-381-11	METAL OXIDE	0.22	5%	3W	F
R445	1-216-381-11	METAL OXIDE	0.22	5%	3W	F
R446	1-247-807-31	CARBON	100	5%	1/4W	
R447	1-249-393-11	CARBON	10	5%	1/4W	
R448	1-249-393-11	CARBON	10	5%	1/4W	
R449	1-247-807-31	CARBON	100	5%	1/4W	
R450	1-247-807-31	CARBON	100	5%	1/4W	
R451	1-247-807-31	CARBON	100	5%	1/4W	
R452	1-247-807-31	CARBON	100	5%	1/4W	
R453	1-247-807-31	CARBON	100	5%	1/4W	
R454	1-247-815-91	CARBON	220	5%	1/4W	
R455	1-249-405-11	CARBON	100	5%	1/4W	F
R456	1-247-807-31	CARBON	100	5%	1/4W	
R457	1-247-807-31	CARBON	100	5%	1/4W	
R458	1-249-426-11	CARBON	5.6K	5%	1/4W	
R459	1-249-415-11	CARBON	680	5%	1/4W	F
R460	1-216-446-00	METAL OXIDE	18	5%	2W	F
R461	1-247-807-31	CARBON	100	5%	1/4W	
R462	1-247-863-91	CARBON	22K	5%	1/4W	
R463	1-249-417-11	CARBON	1K	5%	1/4W	
R468	1-249-427-11	CARBON	6.8K	5%	1/4W	
R480	1-215-882-00	METAL OXIDE	22	5%	2W	F
R481	1-247-807-31	CARBON	100	5%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R482	1-247-863-91	CARBON	22K	5%	1/4W	
R483	1-249-417-11	CARBON	1K	5%	1/4W	

****

*A-1341-937-A DCA BOARD, COMPLETE

****

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C801	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C802	1-124-242-00	ELECT	33MF	20%	25V	
C804	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V	
C805	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C808	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C809	1-124-242-00	ELECT	33MF	20%	25V	
C810	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C811	1-124-242-00	ELECT	33MF	20%	25V	
C813	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V	
C814	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C815	1-124-242-00	ELECT	33MF	20%	25V	
C816	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C817	1-124-242-00	ELECT	33MF	20%	25V	
C818	1-124-242-00	ELECT	33MF	20%	25V	

<CONNCTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN233	*1-774-246-11	CONNECTOR, BOARD TO BOARD 10P	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC801	8-759-984-88	IC LM6361M	
IC802	8-759-089-65	IC LM6364MX	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R801	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	
R802	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R803	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R804	1-216-641-11	METAL CHIP	390	0.50%	1/10W	
R805	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R806	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R807	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R808	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R809	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R810	1-216-295-91	CONDUCTOR, CHIP				
R811	1-216-295-91	CONDUCTOR, CHIP				

****

*A-1341-939-A DCC BOARD, COMPLETE

****

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN232	*1-774-245-11	CONNECTOR, BOARD TO BOARD 8P	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R901	1-214-816-00	METAL	10	1%	1/2W	
R902	1-214-816-00	METAL	10	1%	1/2W	
R903	1-214-816-00	METAL	10	1%	1/2W	
R904	1-214-816-00	METAL	10	1%	1/2W	
R905	1-214-816-00	METAL	10	1%	1/2W	
R906	1-214-816-00	METAL	10	1%	1/2W	
R908	1-214-816-00	METAL	10	1%	1/2W	
R909	1-214-816-00	METAL	10	1%	1/2W	
R910	1-214-816-00	METAL	10	1%	1/2W	
R911	1-214-816-00	METAL	10	1%	1/2W	
R912	1-214-816-00	METAL	10	1%	1/2W	
R913	1-214-816-00	METAL	10	1%	1/2W	
R914	1-214-816-00	METAL	10	1%	1/2W	
R915	1-214-816-00	METAL	10	1%	1/2W	
R916	1-214-816-00	METAL	10	1%	1/2W	
R917	1-214-816-00	METAL	10	1%	1/2W	
R918	1-214-816-00	METAL	10	1%	1/2W	
R919	1-214-816-00	METAL	10	1%	1/2W	
R920	1-214-816-00	METAL	10	1%	1/2W	

****

*A-1346-343-A E BOARD, COMPLETE

****
(EEA, EEB BOARD INCLUDING)

REF.NO.	PART NO.	DESCRIPTION	REMARK
	4-382-854-11	SCREW (M3X10), P, SW (+)	

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C1	1-126-899-11	ELECT	3900MF	20%	16V	
C2	1-126-899-11	ELECT	3900MF	20%	16V	
C3	1-126-899-11	ELECT	3900MF	20%	16V	
C4	1-102-824-00	CERAMIC	470PF	5%	50V	
C5	1-136-153-00	FILM	0.01MF	5%	50V	
C6	1-102-824-00	CERAMIC	470PF	5%	50V	
C7	1-102-824-00	CERAMIC	470PF	5%	50V	
C8	1-136-153-00	FILM	0.01MF	5%	50V	
C9	1-102-824-00	CERAMIC	470PF	5%	50V	
C10	1-136-153-00	FILM	0.01MF	5%	50V	
C11	1-102-824-00	CERAMIC	470PF	5%	50V	
C12	1-102-824-00	CERAMIC	470PF	5%	50V	
C13	1-136-237-11	FILM	0.0032MF	3%	1.6KV	
C14	1-136-237-11	FILM	0.0032MF	3%	1.6KV	
C21	1-136-945-11	FILM	8.2MF	5%	200V	
C22	1-136-945-11	FILM	8.2MF	5%	200V	
C23	1-136-945-11	FILM	8.2MF	5%	200V	
C24	1-136-945-11	FILM	8.2MF	5%	200V	
C36	1-162-116-00	CERAMIC	680PF	10%	2KV	
C37	1-162-116-00	CERAMIC	680PF	10%	2KV	
C38	1-162-116-00	CERAMIC	680PF	10%	2KV	
C42	1-101-004-00	CERAMIC	0.01MF		50V	
C43	1-126-899-11	ELECT	3900MF	20%	16V	
C44	1-126-899-11	ELECT	3900MF	20%	16V	
C45	1-126-899-11	ELECT	3900MF	20%	16V	
C46	1-136-945-11	FILM	8.2MF	5%	200V	
C47	1-136-945-11	FILM	8.2MF	5%	200V	
C48	1-136-945-11	FILM	8.2MF	5%	200V	
C49	1-136-945-11	FILM	8.2MF	5%	200V	
C50	1-136-945-11	FILM	8.2MF	5%	200V	
C51	1-136-945-11	FILM	8.2MF	5%	200V	
C52	1-136-945-11	FILM	8.2MF	5%	200V	
C53	1-136-945-11	FILM	8.2MF	5%	200V	
C55	1-124-903-11	ELECT	1MF	20%	50V	
C56	1-101-004-00	CERAMIC	0.01MF		50V	
C57	1-104-665-11	ELECT	100MF	20%	25V	
C58	1-126-933-11	ELECT	100MF	20%	16V	
C59	1-104-665-11	ELECT	100MF	20%	25V	
C60	1-126-933-11	ELECT	100MF	20%	16V	
C61	1-104-665-11	ELECT	100MF	20%	25V	
C62	1-126-933-11	ELECT	100MF	20%	16V	

E

REF.NO.	PART NO.	DESCRIPTION			REMARK
C63	1-124-903-11	ELECT	1MF	20%	50V
C64	1-124-903-11	ELECT	1MF	20%	50V
C65	1-124-903-11	ELECT	1MF	20%	50V
C66	1-102-824-00	CERAMIC	470PF	5%	50V
C106	1-126-933-11	ELECT	100MF	20%	16V
C112	1-126-933-11	ELECT	100MF	20%	16V
C120	1-107-652-11	ELECT	10MF	20%	200V
C121	1-136-159-00	FILM	0.033MF	5%	50V
C122	1-123-024-21	ELECT	33MF		160V
C123	1-123-024-21	ELECT	33MF		160V
C124	1-125-489-00	ELECT(BLOCK)	560MF	20%	200V
C125	1-136-153-00	FILM	0.01MF	5%	50V
C126	1-137-364-11	FILM	0.001MF	5%	50V
C127	1-126-942-61	ELECT	1000MF	20%	25V
C128	1-109-956-11	ELECT	1MF	20%	200V
C129	1-107-652-11	ELECT	10MF	20%	200V
C134	1-126-942-61	ELECT	1000MF	20%	25V
C139	1-126-942-61	ELECT	1000MF	20%	25V
C142	1-113-706-11	ELECT(BLOCK)	2700MF	20%	200V
C143	1-102-824-00	CERAMIC	470PF	5%	50V
C144	1-136-165-00	FILM	0.1MF	5%	50V
C145	1-136-153-00	FILM	0.01MF	5%	50V
C146	1-136-173-00	FILM	0.47MF	5%	50V
C147	1-136-173-00	FILM	0.47MF	5%	50V
C148	1-126-933-11	ELECT	100MF	20%	16V
C149	1-126-964-11	ELECT	10MF	20%	50V
C150	1-137-364-11	FILM	0.001MF	5%	50V
C151	1-124-903-11	ELECT	1MF	20%	50V
C152	1-136-165-00	FILM	0.1MF	5%	50V
C153	1-126-966-11	ELECT	33MF	20%	16V
C154	1-136-165-00	FILM	0.1MF	5%	50V
C155	1-136-153-00	FILM	0.01MF	5%	50V
C156	1-136-165-00	FILM	0.1MF	5%	50V
C157	1-136-157-00	FILM	0.022MF	5%	50V
C158	1-107-648-91	ELECT	100MF	20%	160V
C159	1-107-746-11	ELECT	10MF	20%	200V
C160	1-136-111-00	FILM	1MF	5%	200V
C161	1-124-903-11	ELECT	1MF	20%	50V
C162	1-136-111-00	FILM	1MF	5%	200V
C164	1-126-964-11	ELECT	10MF	20%	50V
C166	1-126-964-11	ELECT	10MF	20%	50V
C168	1-136-153-00	FILM	0.01MF	5%	50V
C171	1-136-165-00	FILM	0.1MF	5%	50V
C173	1-126-966-11	ELECT	33MF	20%	16V
C175	1-136-722-11	FILM	0.008MF	3%	1.6KV
C177	1-126-964-11	ELECT	10MF	20%	50V
C178	1-101-004-00	CERAMIC	0.01MF		50V
C205	1-101-004-00	CERAMIC	0.01MF		50V
C206	1-101-004-00	CERAMIC	0.01MF		50V
C207	1-101-004-00	CERAMIC	0.01MF		50V
C208	1-101-004-00	CERAMIC	0.01MF		50V
C209	1-101-004-00	CERAMIC	0.01MF		50V
C210	1-101-004-00	CERAMIC	0.01MF		50V
C214	1-101-004-00	CERAMIC	0.01MF		50V

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN101	*1-564-513-11	PLUG, CONNECTOR 10P	
CN102	*1-564-515-11	PLUG, CONNECTOR 12P	
CN103	*1-564-507-11	PLUG, CONNECTOR 4P	
CN104	*1-750-916-11	PIN, CONNECTOR(DY)(PC BOARD)8P	
CN105	*1-750-916-11	PIN, CONNECTOR(DY)(PC BOARD)8P	
CN106	*1-750-916-11	PIN, CONNECTOR(DY)(PC BOARD)8P	
CN107	1-508-742-00	PIN, CONNECTOR 3P	
CN108	1-564-505-11	PLUG, CONNECTOR 2P	
CN109	1-564-505-11	PLUG, CONNECTOR 2P	
CN111	1-508-742-00	PIN, CONNECTOR 3P	
CN113	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
CN114	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
CN115	*1-564-513-11	PLUG, CONNECTOR 10P	
CN116	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	
CN130	*1-774-249-11	CONNECTOR, BOARD TO BOARD 10P	
CN131	*1-774-249-11	CONNECTOR, BOARD TO BOARD 10P	
CN134	*1-774-249-11	CONNECTOR, BOARD TO BOARD 10P	
CN135	*1-774-249-11	CONNECTOR, BOARD TO BOARD 10P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D1	8-719-054-87	DIODE DD82RC	
D3	8-719-911-19	DIODE 1SS119-25	
D4	8-719-911-19	DIODE 1SS119-25	
D5	8-719-911-19	DIODE 1SS119-25	
D21	8-719-054-88	DIODE DFC15TR	
D22	8-719-054-88	DIODE DFC15TR	
D23	8-719-054-88	DIODE DFC15TR	
D24	8-719-054-88	DIODE DFC15TR	
D25	8-719-054-88	DIODE DFC15TR	
D106	8-719-911-19	DIODE 1SS119-25	
D107	8-719-911-19	DIODE 1SS119-25	
D109	8-719-948-45	DIODE ERA22-08	
D110	8-719-911-19	DIODE 1SS119-25	
D111	8-719-911-19	DIODE 1SS119-25	
D112	8-719-043-14	DIODE ESAD39M-06C	
D113	8-719-911-19	DIODE 1SS119-25	
D114	8-719-110-67	DIODE RD27ESB2	
D115	8-719-110-53	DIODE RD20ESB2	
D116	8-719-920-67	DIODE ERC91-02	
D117	8-719-911-19	DIODE 1SS119-25	
D118	8-719-948-45	DIODE ERA22-08	
D119	8-719-911-19	DIODE 1SS119-25	
D121	8-719-911-19	DIODE 1SS119-25	
D123	8-719-911-19	DIODE 1SS119-25	
D124	8-719-948-45	DIODE ERA22-08	
D125	8-719-948-45	DIODE ERA22-08	
D126	8-719-110-88	DIODE RD39ESB2	
D127	8-719-110-41	DIODE RD15ESB2	
D128	8-719-110-41	DIODE RD15ESB2	
D129	8-719-110-41	DIODE RD15ESB2	
D130	8-719-110-41	DIODE RD15ESB2	
D133	8-719-911-19	DIODE 1SS119-25	
D134	8-719-300-80	DIODE RU-1C	
D135	8-719-300-80	DIODE RU-1C	
D136	8-719-300-80	DIODE RU-1C	
D137	8-719-300-80	DIODE RU-1C	
D138	8-719-911-19	DIODE 1SS119-25	
D139	8-719-911-19	DIODE 1SS119-25	
D140	8-719-911-19	DIODE 1SS119-25	
D141	8-719-911-19	DIODE 1SS119-25	
D142	8-719-911-19	DIODE 1SS119-25	
D144	8-719-901-19	DIODE V11N	
D145	8-719-911-19	DIODE 1SS119-25	
D146	8-719-948-45	DIODE ERA22-08	
D147	8-719-948-45	DIODE ERA22-08	
D149	8-719-911-19	DIODE 1SS119-25	
D150	8-719-920-67	DIODE ERC91-02	
D151	8-719-911-19	DIODE 1SS119-25	

<FERRITE BEAD>

E

REF.NO.	PART NO.	DESCRIPTION	REMARK
FB1	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB2	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB3	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB6	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB7	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC1	8-759-145-58	IC UPC4558C	
IC2	8-759-145-58	IC UPC4558C	
IC3	8-759-145-58	IC UPC4558C	
IC5	8-759-700-69	IC NJM79L12A	
IC109	8-759-708-12	IC NJM78L12A	
IC112	8-759-145-58	IC UPC4558C	
IC113	8-759-103-93	IC UPC393C	
IC114	8-759-103-93	IC UPC393C	
IC115	8-759-103-93	IC UPC393C	
IC116	8-759-708-12	IC NJM78L12A	
IC117	8-759-345-38	IC HD14538BP	
IC118	8-759-708-12	IC NJM78L12A	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L100	1-459-483-00	COIL (WITH CORE)	
L103	1-459-155-00	COIL (WITH CORE) 45UH	
L106	1-459-483-00	COIL (WITH CORE)	
L107	1-407-500-00	INDUCTOR 4.7MMH	
L108	1-407-500-00	INDUCTOR 4.7MMH	
L109	1-459-104-00	COIL, DUST CORE	
L110	1-459-104-00	COIL, DUST CORE	
L112	1-411-566-11	COIL, CHOKE	
L113	1-410-680-31	INDUCTOR 330UH	
L114	1-410-686-11	INDUCTOR 1MMH	
L115	1-407-500-00	INDUCTOR 4.7MMH	
L117	1-459-483-00	COIL (WITH CORE)	
LV1	1-411-568-11	COIL, HORIZONTAL ADJUSTMENT	
LV2	1-411-568-11	COIL, HORIZONTAL ADJUSTMENT	
LV3	1-411-568-11	COIL, HORIZONTAL ADJUSTMENT	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q1	8-729-142-69	TRANSISTOR 2SK817	
Q2	8-729-142-68	TRANSISTOR 2SJ143	
Q3	8-729-142-69	TRANSISTOR 2SK817	
Q4	8-729-142-68	TRANSISTOR 2SJ143	
Q5	8-729-142-69	TRANSISTOR 2SK817	
Q6	8-729-142-68	TRANSISTOR 2SJ143	
Q7	8-729-033-56	TRANSISTOR 2SC5238-CB	
Q8	8-729-033-56	TRANSISTOR 2SC5238-CB	
Q102	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q106	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q107	8-729-140-96	TRANSISTOR 2SD774-34	
Q108	8-729-140-97	TRANSISTOR 2SB734-34	
Q109	8-729-105-74	TRANSISTOR 2SK523-M1	
Q110	8-729-033-57	TRANSISTOR IRFP350LF20	
Q111	8-729-143-42	TRANSISTOR 2SK929	
Q112	8-729-142-68	TRANSISTOR 2SJ143	
Q113	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q115	8-729-926-42	TRANSISTOR XDC114ES	
Q116	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q117	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q118	8-729-105-74	TRANSISTOR 2SK523-M1	
Q119	8-729-900-89	TRANSISTOR DTC144ES	
Q121	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q127	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q128	8-729-900-89	TRANSISTOR DTC144ES	
Q130	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q131	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q132	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q133	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q134	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q135	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q136	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q137	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q138	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q139	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q140	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q141	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q142	8-729-143-42	TRANSISTOR 2SK929	
Q143	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q144	8-729-905-86	TRANSISTOR 2SC4054N	
Q145	8-729-402-03	TRANSISTOR 2SK755	
Q146	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q147	8-729-905-86	TRANSISTOR 2SC4054N	
Q148	8-729-802-71	TRANSISTOR 2SA1407-D	
Q149	8-729-119-78	TRANSISTOR 2SC2785-HFE	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1	1-216-389-11	METAL OXIDE	1	5%	3W	F
R2	1-216-389-11	METAL OXIDE	1	5%	3W	F
R3	1-216-389-11	METAL OXIDE	1	5%	3W	F
R4	1-249-417-11	CARBON	1K	5%	1/4W	
R5	1-215-445-00	METAL	10K	1%	1/4W	
R7	1-215-445-00	METAL	10K	1%	1/4W	
R8	1-215-445-00	METAL	10K	1%	1/4W	
R9	1-215-445-00	METAL	10K	1%	1/4W	
R10	1-249-417-11	CARBON	1K	5%	1/4W	
R14	1-249-417-11	CARBON	1K	5%	1/4W	
R15	1-215-445-00	METAL	10K	1%	1/4W	
R17	1-215-445-00	METAL	10K	1%	1/4W	
R18	1-215-445-00	METAL	10K	1%	1/4W	
R19	1-215-445-00	METAL	10K	1%	1/4W	
R20	1-249-417-11	CARBON	1K	5%	1/4W	
R24	1-249-417-11	CARBON	1K	5%	1/4W	
R25	1-215-445-00	METAL	10K	1%	1/4W	
R27	1-215-445-00	METAL	10K	1%	1/4W	
R28	1-215-445-00	METAL	10K	1%	1/4W	
R29	1-215-445-00	METAL	10K	1%	1/4W	
R30	1-249-417-11	CARBON	1K	5%	1/4W	
R57	1-247-807-31	CARBON	100	5%	1/4W	
R58	1-247-807-31	CARBON	100	5%	1/4W	
R59	1-247-807-31	CARBON	100	5%	1/4W	
R60	1-247-807-31	CARBON	100	5%	1/4W	
R61	1-247-807-31	CARBON	100	5%	1/4W	
R62	1-247-807-31	CARBON	100	5%	1/4W	
R63	1-247-694-71	CARBON	33	5%	1/4W	F
R64	1-247-694-71	CARBON	33	5%	1/4W	F
R65	1-247-694-71	CARBON	33	5%	1/4W	F
R66	1-215-905-11	METAL OXIDE	10	5%	3W	F
R67	1-216-400-11	METAL OXIDE	8.2	5%	3W	F
R68	1-216-400-11	METAL OXIDE	8.2	5%	3W	F
R69	1-216-400-11	METAL OXIDE	8.2	5%	3W	F
R70	1-216-400-11	METAL OXIDE	8.2	5%	3W	F
R71	1-216-400-11	METAL OXIDE	8.2	5%	3W	F
R72	1-216-400-11	METAL OXIDE	8.2	5%	3W	F
R75	1-247-863-91	CARBON	22K	5%	1/4W	
R76	1-247-863-91	CARBON	22K	5%	1/4W	
R77	1-247-863-91	CARBON	22K	5%	1/4W	
R78	1-249-425-11	CARBON	4.7K	5%	1/4W	

E

REF.NO.	PART NO.	DESCRIPTION				REMARK
R79	1-249-431-11	CARBON	15K	5%	1/4W	
R80	1-249-429-11	CARBON	10K	5%	1/4W	
R81	1-249-429-11	CARBON	10K	5%	1/4W	
R82	1-249-427-11	CARBON	6.8K	5%	1/4W	
R83	1-249-437-11	CARBON	47K	5%	1/4W	
R84	1-249-427-11	CARBON	6.8K	5%	1/4W	
R85	1-249-437-11	CARBON	47K	5%	1/4W	
R86	1-249-427-11	CARBON	6.8K	5%	1/4W	
R87	1-215-905-11	METAL OXIDE	10	5%	3W	F
R88	1-249-417-11	CARBON	1K	5%	1/4W	
R89	1-249-437-11	CARBON	47K	5%	1/4W	
R90	1-247-863-91	CARBON	22K	5%	1/4W	
R91	1-247-863-91	CARBON	22K	5%	1/4W	
R92	1-247-863-91	CARBON	22K	5%	1/4W	
R110	1-249-417-11	CARBON	1K	5%	1/4W	
R112	1-249-425-11	CARBON	4.7K	5%	1/4W	
R113	1-247-807-31	CARBON	100	5%	1/4W	
R114	1-249-417-11	CARBON	1K	5%	1/4W	
R134	1-215-435-00	METAL	3.9K	1%	1/4W	
R147	1-249-421-11	CARBON	2.2K	5%	1/4W	
R149	1-215-421-00	METAL	1K	1%	1/4W	
R150	1-215-461-00	METAL	47K	1%	1/4W	
R160	1-249-417-11	CARBON	1K	5%	1/4W	
R161	1-215-467-00	METAL	82K	1%	1/4W	
R162	1-215-866-11	METAL OXIDE	330	5%	1W	F
R164	1-249-421-11	CARBON	2.2K	5%	1/4W	
R165	1-215-445-00	METAL	10K	1%	1/4W	
R167	1-249-437-11	CARBON	47K	5%	1/4W	
R168	1-249-429-11	CARBON.	10K	5%	1/4W	
R169	1-247-725-11	CARBON	10K	5%	1/4W	F
R170	1-249-425-11	CARBON	4.7K	5%	1/4W	
R171	1-249-417-11	CARBON	1K	5%	1/4W	
R172	1-249-417-11	CARBON	1K	5%	1/4W	
R173	1-219-677-11	METAL	1.8	5%	10W	
R174	1-219-677-11	METAL	1.8	5%	10W	
R176	1-247-688-11	CARBON	10	5%	1/4W	F
R177	1-215-445-00	METAL	10K	1%	1/4W	
R178	1-249-417-11	CARBON	1K	5%	1/4W	
R179	1-249-429-11	CARBON	10K	5%	1/4W	
R180	1-215-433-00	METAL	3.3K	1%	1/4W	
R181	1-249-441-11	CARBON	100K	5%	1/4W	
R182	1-249-421-11	CARBON	2.2K	5%	1/4W	
R183	1-247-807-31	CARBON	100	5%	1/4W	
R184	1-249-425-11	CARBON	4.7K	5%	1/4W	
R185	1-249-417-11	CARBON	1K	5%	1/4W	
R188	1-247-863-91	CARBON	22K	5%	1/4W	
R190	1-215-882-00	METAL OXIDE	22	5%	2W	F
R197	1-247-807-31	CARBON	100	5%	1/4W	
R201	1-249-417-11	CARBON	1K	5%	1/4W	
R203	1-249-453-11	CARBON	3.3	5%	1/4W	F
R208	1-216-381-11	METAL OXIDE	0.22	5%	3W	F
R209	1-249-417-11	CARBON	1K	5%	1/4W	
R212	1-247-863-91	CARBON	22K	5%	1/4W	
R214	1-216-446-00	METAL OXIDE	18	5%	2W	F
R217	1-249-399-11	CARBON	33	5%	1/4W	
R223	1-249-429-11	CARBON	10K	5%	1/4W	
R224	1-249-429-11	CARBON	10K	5%	1/4W	
R227	1-249-429-11	CARBON	10K	5%	1/4W	
R228	1-249-429-11	CARBON	10K	5%	1/4W	
R229	1-249-429-11	CARBON	10K	5%	1/4W	
R230	1-249-443-11	CARBON	0.47	5%	1/4W	F
R231	1-249-443-11	CARBON	0.47	5%	1/4W	F
R232	1-249-437-11	CARBON	47K	5%	1/4W	
R233	1-249-417-11	CARBON	1K	5%	1/4W	
R234	1-249-417-11	CARBON	1K	5%	1/4W	
R235	1-249-437-11	CARBON	47K	5%	1/4W	
R236	1-249-437-11	CARBON	47K	5%	1/4W	
R237	1-249-441-11	CARBON	100K	5%	1/4W	
R238	1-249-399-11	CARBON	33	5%	1/4W	
R239	1-249-423-11	CARBON	3.3K	5%	1/4W	
R240	1-249-441-11	CARBON	100K	5%	1/4W	
R241	1-249-437-11	CARBON	47K	5%	1/4W	
R242	1-215-461-00	METAL	47K	1%	1/4W	
R243	1-215-469-00	METAL	100K	1%	1/4W	
R244	1-249-423-11	CARBON	3.3K	5%	1/4W	
R245	1-216-441-00	METAL OXIDE	27K	5%	1W	F
R246	1-215-435-00	METAL	3.9K	1%	1/4W	
R247	1-249-421-11	CARBON	2.2K	5%	1/4W	
R248	1-249-425-11	CARBON	4.7K	5%	1/4W	
R249	1-215-421-00	METAL	1K	1%	1/4W	
R250	1-215-445-00	METAL	10K	1%	1/4W	
R251	1-247-887-00	CARBON	220K	5%	1/4W	
R252	1-249-429-11	CARBON	10K	5%	1/4W	
R254	1-247-807-31	CARBON	100	5%	1/4W	
R255	1-249-417-11	CARBON	1K	5%	1/4W	
R256	1-249-441-11	CARBON	100K	5%	1/4W	
R257	1-249-437-11	CARBON	47K	5%	1/4W	
R258	1-215-435-00	METAL	3.9K	1%	1/4W	
R259	1-215-439-00	METAL	5.6K	1%	1/4W	
R260	1-215-445-00	METAL	10K	1%	1/4W	
R261	1-249-429-11	CARBON	10K	5%	1/4W	
R262	1-247-807-31	CARBON	100	5%	1/4W	
R263	1-215-878-00	METAL OXIDE	33K	5%	1W	F
R264	1-249-429-11	CARBON	10K	5%	1/4W	
R265	1-247-807-31	CARBON	100	5%	1/4W	
R266	1-249-441-11	CARBON	100K	5%	1/4W	
R267	1-215-379-00	METAL	18	1%	1/4W	
R268	1-215-379-00	METAL	18	1%	1/4W	
R269	1-215-421-00	METAL	1K	1%	1/4W	
R270	1-215-415-00	METAL	560	1%	1/4W	
R271	1-215-924-00	METAL OXIDE	15K	5%	3W	F
R272	1-249-453-11	CARBON	3.3	5%	1/4W	F
R273	1-249-429-11	CARBON	10K	5%	1/4W	
R274	1-249-429-11	CARBON	10K	5%	1/4W	
R275	1-249-429-11	CARBON	10K	5%	1/4W	
R276	1-249-429-11	CARBON	10K	5%	1/4W	
R277	1-215-405-00	METAL	220	1%	1/4W	
R284	1-215-463-00	METAL	56K	1%	1/4W	
R285	1-215-445-00	METAL	10K	1%	1/4W	
R286	1-215-911-11	METAL OXIDE	100	5%	3W	F
R287	1-202-727-00	SOLID	4.7M	20%	1/2W	
R288	1-202-727-00	SOLID	4.7M	20%	1/2W	
R289	1-202-727-00	SOLID	4.7M	20%	1/2W	
R290	1-202-727-00	SOLID	4.7M	20%	1/2W	
R300	1-249-404-00	CARBON	82	5%	1/4W	
R301	1-215-924-00	METAL OXIDE	15K	5%	3W	F
R302	1-215-924-00	METAL OXIDE	15K	5%	3W	F
R303	1-216-381-11	METAL OXIDE	0.22	5%	3W	F

<VARIABLE RESISTOR>

RV104	1-241-767-21	RES, ADJ, CARBON 100K

<TRANSFORMER>

REF.NO.	PART NO.	DESCRIPTION	REMARK
T102	1-439-480-11	TRANSFORMER, HORIZONTAL OUTPUT	
T103	1-437-144-11	TRANSFORMER, FERRITE (HDT)	
T104	1-437-144-11	TRANSFORMER, FERRITE (HDT)	
T105	1-424-290-11	TRANSFORMER, DRIVE	
T106	1-437-144-11	TRANSFORMER, FERRITE (HDT)	

****

*A-1341-941-A EEA BOARD, COMPLETE
****

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C2032	1-126-964-11	ELECT	10MF	20%	50V	
C2040	1-104-665-11	ELECT	100MF	20%	25V	
C2041	1-126-933-11	ELECT	100MF	20%	16V	
C2101	1-102-973-00	CERAMIC	100PF	5%	50V	
C2102	1-136-159-00	FILM	0.033MF	5%	50V	
C2104	1-136-165-00	FILM	0.1MF	5%	50V	
C2105	1-136-165-00	FILM	0.1MF	5%	50V	
C2109	1-124-903-11	ELECT	1MF	20%	50V	
C2110	1-126-933-11	ELECT	100MF	20%	16V	
C2111	1-126-933-11	ELECT	100MF	20%	16V	
C2113	1-128-551-11	ELECT	22MF	20%	50V	
C2114	1-109-889-11	ELECT	1MF	20%	50V	
C2115	1-136-153-00	FILM	0.01MF	5%	50V	
C2116	1-137-364-11	FILM	0.001MF	5%	50V	
C2117	1-102-973-00	CERAMIC	100PF	5%	50V	
C2118	1-136-165-00	FILM	0.1MF	5%	50V	
C2119	1-126-933-11	ELECT	100MF	20%	16V	
C2133	1-107-715-11	ELECT	22MF	20%	16V	
C2135	1-104-665-11	ELECT	100MF	20%	25V	
C2136	1-128-551-11	ELECT	22MF	20%	50V	
C2137	1-102-973-00	CERAMIC	100PF	5%	50V	
C2138	1-126-964-11	ELECT	10MF	20%	50V	
C2141	1-136-153-00	FILM	0.01MF	5%	50V	
C2163	1-126-964-11	ELECT	10MF	20%	50V	
C2165	1-126-964-11	ELECT	10MF	20%	50V	
C2167	1-102-824-00	CERAMIC	470PF	5%	50V	
C2169	1-124-768-11	ELECT	4.7MF	20%	50V	
C2170	1-126-967-11	ELECT	47MF	20%	16V	
C2174	1-126-966-11	ELECT	33MF	20%	16V	
C2200	1-101-004-00	CERAMIC	0.01MF		50V	
C2201	1-101-004-00	CERAMIC	0.01MF		50V	
C2202	1-101-004-00	CERAMIC	0.01MF		50V	
C2203	1-101-004-00	CERAMIC	0.01MF		50V	
C2204	1-101-004-00	CERAMIC	0.01MF		50V	
C2205	1-101-004-00	CERAMIC	0.01MF		50V	
C2206	1-101-004-00	CERAMIC	0.01MF		50V	
C2207	1-101-004-00	CERAMIC	0.01MF		50V	
C2208	1-101-004-00	CERAMIC	0.01MF		50V	
C2210	1-101-004-00	CERAMIC	0.01MF		50V	
C2211	1-101-004-00	CERAMIC	0.01MF		50V	
C2212	1-101-004-00	CERAMIC	0.01MF		50V	
C2213	1-101-004-00	CERAMIC	0.01MF		50V	
C2214	1-124-903-11	ELECT	1MF	20%	50V	
C2215	1-101-004-00	CERAMIC	0.01MF		50V	
C2216	1-101-004-00	CERAMIC	0.01MF		50V	
C2217	1-101-004-00	CERAMIC	0.01MF		50V	
C2218	1-136-153-00	FILM	0.01MF	5%	50V	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN132	*1-774-246-11	CONNECTOR, BOARD TO BOARD 10P	
CN133	*1-774-246-11	CONNECTOR, BOARD TO BOARD 10P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D2020	8-719-911-19	DIODE 1SS119-25	
D2103	8-719-911-19	DIODE 1SS119-25	
D2104	8-719-911-19	DIODE 1SS119-25	
D2105	8-719-911-19	DIODE 1SS119-25	
D2120	8-719-911-19	DIODE 1SS119-25	
D2131	8-719-911-19	DIODE 1SS119-25	
D2132	8-719-911-19	DIODE 1SS119-25	
D2143	8-719-911-19	DIODE 1SS119-25	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC2004	8-759-231-58	IC TA7812S	
IC2101	8-759-345-38	IC HD14538BP	
IC2103	8-759-109-82	IC UPC814C	
IC2104	8-759-145-58	IC UPC4558C	
IC2105	8-759-145-58	IC UPC4558C	
IC2106	8-759-145-58	IC UPC4558C	
IC2107	8-759-014-95	IC MC1495L	
IC2108	8-759-145-58	IC UPC4558C	
IC2110	8-759-701-88	IC NJM7912FA	
IC2111	8-759-100-75	IC UPC1394C	
IC2118	8-759-145-58	IC UPC4558C	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L2104	1-459-155-00	COIL (WITH CORE) 45UH	
L2116	1-459-155-00	COIL (WITH CORE) 45UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q2101	8-729-105-74	TRANSISTOR 2SK523-M1	
Q2103	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q2104	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q2129	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q2152	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q2153	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q2154	8-729-119-78	TRANSISTOR 2SC2785-HFE	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R2101	1-215-457-00	METAL	33K	1%	1/4W	
R2102	1-249-429-11	CARBON	10K	5%	1/4W	
R2103	1-249-429-11	CARBON	10K	5%	1/4W	
R2109	1-249-429-11	CARBON	10K	5%	1/4W	
R2111	1-249-429-11	CARBON	10K	5%	1/4W	
R2115	1-215-445-00	METAL	10K	1%	1/4W	
R2116	1-215-445-00	METAL	10K	1%	1/4W	
R2117	1-215-433-00	METAL	3.3K	1%	1/4W	
R2118	1-249-423-11	CARBON	3.3K	5%	1/4W	
R2119	1-215-457-00	METAL	33K	1%	1/4W	
R2120	1-215-457-00	METAL	33K	1%	1/4W	
R2121	1-215-445-00	METAL	10K	1%	1/4W	
R2122	1-249-425-11	CARBON	4.7K	5%	1/4W	
R2123	1-215-445-00	METAL	10K	1%	1/4W	
R2124	1-215-445-00	METAL	10K	1%	1/4W	
R2125	1-215-465-00	METAL	68K	1%	1/4W	
R2126	1-215-465-00	METAL	68K	1%	1/4W	
R2127	1-215-447-00	METAL	12K	1%	1/4W	
R2128	1-215-445-00	METAL	10K	1%	1/4W	
R2129	1-215-447-00	METAL	12K	1%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R2130	1-249-425-11	CARBON	4.7K	5%	1/4W	
R2131	1-215-445-00	METAL	10K	1%	1/4W	
R2132	1-215-449-00	METAL	15K	1%	1/4W	
R2133	1-249-425-11	CARBON	4.7K	5%	1/4W	
R2135	1-249-429-11	CARBON	10K	5%	1/4W	
R2136	1-249-423-11	CARBON	3.3K	5%	1/4W	
R2137	1-249-423-11	CARBON	3.3K	5%	1/4W	
R2138	1-249-423-11	CARBON	3.3K	5%	1/4W	
R2139	1-249-425-11	CARBON	4.7K	5%	1/4W	
R2140	1-249-417-11	CARBON	1K	5%	1/4W	
R2141	1-249-421-11	CARBON	2.2K	5%	1/4W	
R2142	1-249-421-11	CARBON	2.2K	5%	1/4W	
R2143	1-249-420-11	CARBON	1.8K	5%	1/4W	
R2144	1-249-421-11	CARBON	2.2K	5%	1/4W	
R2145	1-249-423-11	CARBON	3.3K	5%	1/4W	
R2146	1-249-435-11	CARBON	33K	5%	1/4W	
R2148	1-249-440-11	CARBON	82K	5%	1/4W	
R2151	1-249-425-11	CARBON	4.7K	5%	1/4W	
R2152	1-215-445-00	METAL	10K	1%	1/4W	
R2153	1-215-445-00	METAL	10K	1%	1/4W	
R2154	1-247-895-91	CARBON	470K	5%	1/4W	
R2155	1-249-420-11	CARBON	1.8K	5%	1/4W	
R2156	1-247-863-91	CARBON	22K	5%	1/4W	
R2157	1-249-413-11	CARBON	470	5%	1/4W	
R2158	1-247-807-31	CARBON	100	5%	1/4W	
R2159	1-249-426-11	CARBON	5.6K	5%	1/4W	
R2163	1-215-461-00	METAL	47K	1%	1/4W	
R2166	1-249-429-11	CARBON	10K	5%	1/4W	
R2186	1-249-437-11	CARBON	47K	5%	1/4W	
R2187	1-215-461-00	METAL	47K	1%	1/4W	
R2191	1-249-423-11	CARBON	3.3K	5%	1/4W	
R2192	1-247-863-91	CARBON	22K	5%	1/4W	
R2193	1-247-903-00	CARBON	1M	5%	1/4W	
R2194	1-249-423-11	CARBON	3.3K	5%	1/4W	
R2195	1-249-423-11	CARBON	3.3K	5%	1/4W	
R2196	1-249-438-11	CARBON	56K	5%	1/4W	
R2198	1-215-447-00	METAL	12K	1%	1/4W	
R2199	1-249-423-11	CARBON	3.3K	5%	1/4W	
R2204	1-249-429-11	CARBON	10K	5%	1/4W	
R2205	1-249-426-11	CARBON	5.6K	5%	1/4W	
R2206	1-249-429-11	CARBON	10K	5%	1/4W	
R2207	1-249-441-11	CARBON	100K	5%	1/4W	
R2210	1-215-451-00	METAL	18K	1%	1/4W	
R2219	1-215-445-00	METAL	10K	1%	1/4W	
R2220	1-215-445-00	METAL	10K	1%	1/4W	
R2226	1-215-445-00	METAL	10K	1%	1/4W	
R2281	1-249-451-11	CARBON	2.2	5%	1/4W	F
R2282	1-249-451-11	CARBON	2.2	5%	1/4W	F
R2283	1-249-425-11	CARBON	4.7K	5%	1/4W	
R2296	1-249-429-11	CARBON	10K	5%	1/4W	
R2310	1-249-401-11	CARBON	47	5%	1/4W	
R2311	1-249-430-11	CARBON	12K	5%	1/4W	
R2312	1-249-430-11	CARBON	12K	5%	1/4W	
R2313	1-249-418-11	CARBON	1.2K	5%	1/4W	
R2314	1-249-401-11	CARBON	47	5%	1/4W	
R2315	1-249-419-11	CARBON	1.5K	5%	1/4W	
R2316	1-249-401-11	CARBON	47	5%	1/4W	
R2317	1-215-461-00	METAL	47K	1%	1/4W	
R2318	1-215-445-00	METAL	10K	1%	1/4W	
R2319	1-249-429-11	CARBON	10K	5%	1/4W	
R2320	1-215-457-00	METAL	33K	1%	1/4W	
R2321	1-215-463-00	METAL	56K	1%	1/4W	
R2322	1-215-469-00	METAL	100K	1%	1/4W	
R2323	1-215-445-00	METAL	10K	1%	1/4W	
R2324	1-249-426-11	CARBON	5.6K	5%	1/4W	

<VARIABLE RESISTOR>

RV2101	1-241-790-21	RES, ADJ, CERMET	470K

* * *

*A-1341-942-A EEB BOARD, COMPLETE

<CONNECTOR>

CN136	*1-774-246-11	CONNECTOR, BOARD TO BOARD 10P

<RESISTOR>

R2011	1-214-824-11	METAL	22	1%	1/2W
R2012	1-214-824-11	METAL	22	1%	1/2W
R2013	1-214-824-11	METAL	22	1%	1/2W
R2021	1-214-824-11	METAL	22	1%	1/2W
R2022	1-214-824-11	METAL	22	1%	1/2W
R2023	1-214-824-11	METAL	22	1%	1/2W
R2031	1-214-824-11	METAL	22	1%	1/2W
R2032	1-214-824-11	METAL	22	1%	1/2W
R2033	1-214-824-11	METAL	22	1%	1/2W
R2034	1-214-824-11	METAL	22	1%	1/2W
R2035	1-214-824-11	METAL	22	1%	1/2W
R2036	1-214-824-11	METAL	22	1%	1/2W
R2037	1-214-824-11	METAL	22	1%	1/2W
R2038	1-214-824-11	METAL	22	1%	1/2W
R2039	1-214-824-11	METAL	22	1%	1/2W
R2040	1-214-824-11	METAL	22	1%	1/2W
R2041	1-214-824-11	METAL	22	1%	1/2W
R2042	1-214-824-11	METAL	22	1%	1/2W

* * *

*A-1346-344-A DA BOARD, COMPLETE

4-382-854-11 SCREW (M3X10), P, SW (+)

<CAPACITOR>

C1	1-124-122-11	ELECT	100MF	20%	50V
C2	1-126-933-11	ELECT	100MF	20%	16V
C3	1-124-122-11	ELECT	100MF	20%	50V
C4	1-126-935-11	ELECT	470MF	20%	16V
C5	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C6	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C7	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C8	1-124-903-11	ELECT	1MF	20%	50V
C9	1-136-153-00	FILM	0.01MF	5%	50V
C10	1-124-903-11	ELECT	1MF	20%	50V
C11	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C12	1-124-903-11	ELECT	1MF	20%	50V
C13	1-136-153-00	FILM	0.01MF	5%	50V
C14	1-126-964-11	ELECT	10MF	20%	50V
C15	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C16	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C17	1-124-903-11	ELECT	1MF	20%	50V
C19	1-124-903-11	ELECT	1MF	20%	50V
C20	1-136-153-00	FILM	0.01MF	5%	50V
C21	1-124-903-11	ELECT	1MF	20%	50V

DA

REF.NO.	PART NO.	DESCRIPTION			REMARK
C22	1-124-925-11	ELECT	2.2MF	20%	50V
C23	1-126-964-11	ELECT	10MF	20%	50V
C24	1-126-964-11	ELECT	10MF	20%	50V
C25	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C26	1-124-903-11	ELECT	1MF	20%	50V
C27	1-136-153-00	FILM	0.01MF	5%	50V
C28	1-124-903-11	ELECT	1MF	20%	50V
C29	1-126-964-11	ELECT	10MF	20%	50V
C30	1-126-964-11	ELECT	10MF	20%	50V
C31	1-124-925-11	ELECT	2.2MF	20%	50V
C32	1-124-925-11	ELECT	2.2MF	20%	50V
C33	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C34	1-124-927-11	ELECT	4.7MF	20%	50V
C35	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C36	1-130-480-00	FILM	0.0056MF	5%	50V
C37	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C38	1-124-927-11	ELECT	4.7MF	20%	50V
C39	1-126-964-11	ELECT	10MF	20%	50V
C40	1-126-933-11	ELECT	100MF	20%	16V
C41	1-130-480-00	FILM	0.0056MF	5%	50V
C42	1-124-927-11	ELECT	4.7MF	20%	50V
C43	1-126-964-11	ELECT	10MF	20%	50V
C44	1-126-940-11	ELECT	330MF	20%	16V
C45	1-136-153-00	FILM	0.01MF	5%	50V
C46	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C47	1-124-927-11	ELECT	4.7MF	20%	50V
C48	1-124-927-11	ELECT	4.7MF	20%	50V
C49	1-126-940-11	ELECT	330MF	20%	16V
C50	1-136-153-00	FILM	0.01MF	5%	50V
C51	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C52	1-137-366-11	FILM	0.0022MF	5%	50V
C53	1-124-925-11	ELECT	2.2MF	20%	50V
C54	1-126-934-11	ELECT	220MF	20%	16V
C55	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C56	1-163-253-11	CERAMIC CHIP	120PF	5%	50V
C57	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C58	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C59	1-124-902-00	ELECT	0.47MF	20%	50V
C60	1-124-927-11	ELECT	4.7MF	20%	50V
C61	1-126-966-11	ELECT	33MF	20%	50V
C62	1-128-551-11	ELECT	22MF	20%	50V
C63	1-124-925-11	ELECT	2.2MF	20%	50V
C64	1-126-940-11	ELECT	330MF	20%	16V
C65	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C66	1-130-471-00	FILM	0.001MF	5%	50V
C67	1-130-471-00	FILM	0.001MF	5%	50V
C68	1-124-927-11	ELECT	4.7MF	20%	50V
C69	1-137-366-11	FILM	0.0022MF	5%	50V
C70	1-137-368-11	FILM	0.0047MF	5%	50V
C71	1-136-173-00	FILM	0.47MF	5%	50V
C72	1-126-964-11	ELECT	10MF	20%	50V
C73	1-136-165-00	FILM	0.1MF	5%	50V
C74	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C75	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C76	1-126-935-11	ELECT	470MF	20%	16V
C77	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C78	1-126-964-11	ELECT	10MF	20%	50V
C79	1-126-964-11	ELECT	10MF	20%	50V
C80	1-126-964-11	ELECT	10MF	20%	50V
C81	1-126-964-11	ELECT	10MF	20%	50V
C82	1-126-964-11	ELECT	10MF	20%	50V
C83	1-126-964-11	ELECT	10MF	20%	50V
C84	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C85	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C86	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C87	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C88	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C89	1-164-346-11	CERAMIC CHIP	1MF		16V
C90	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C91	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C92	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C93	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C94	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C95	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C96	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C97	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C98	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C99	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C100	1-136-153-00	FILM	0.01MF	5%	50V
C101	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C102	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C103	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C105	1-126-967-11	ELECT	47MF	20%	16V
C106	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C107	1-124-925-11	ELECT	2.2MF	20%	50V
C108	1-124-925-11	ELECT	2.2MF	20%	50V
C109	1-137-364-11	FILM	0.001MF	5%	50V
C110	1-136-161-00	FILM	0.047MF	5%	50V
C111	1-124-927-11	ELECT	4.7MF	20%	50V
C112	1-124-903-11	ELECT	1MF	20%	50V
C113	1-126-933-11	ELECT	100MF	20%	16V
C114	1-124-902-00	ELECT	0.47MF	20%	50V
C115	1-124-927-11	ELECT	4.7MF	20%	50V
C116	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C117	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C118	1-163-275-11	CERAMIC CHIP	0.001MF	5%	50V
C119	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C201	1-127-518-11	ELECT(SOLID)	100MF	20%	16V
C202	1-136-155-00	FILM	0.015MF	5%	50V
C203	1-136-159-00	FILM	0.033MF	5%	50V
C204	1-164-346-11	CERAMIC CHIP	1MF		16V
C205	1-136-165-00	FILM	0.1MF	5%	50V
C206	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C207	1-126-967-11	ELECT	47MF	20%	16V
C208	1-124-903-11	ELECT	1MF	20%	50V
C209	1-136-161-00	FILM	0.047MF	5%	50V
C210	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C211	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C212	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C213	1-124-902-00	ELECT	0.47MF	20%	50V
C214	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C215	1-104-913-11	TANTAL. CHIP	10MF	20%	16V
C216	1-164-346-11	CERAMIC CHIP	1MF		16V
C217	1-127-518-11	ELECT(SOLID)	100MF	20%	16V
C218	1-126-964-11	ELECT	10MF	20%	50V
C219	1-126-964-11	ELECT	10MF	20%	50V
C220	1-126-964-11	ELECT	10MF	20%	50V
C221	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C222	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C223	1-136-153-00	FILM	0.01MF	5%	50V
C224	1-124-927-11	ELECT	4.7MF	20%	50V
C225	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C226	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C227	1-164-346-11	CERAMIC CHIP	1MF		16V
C228	1-124-925-11	ELECT	2.2MF	20%	50V
C229	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C230	1-163-031-11	CERAMIC CHIP	0.01MF		50V

DA

REF.NO.	PART NO.	DESCRIPTION			REMARK
C301	1-128-551-11	ELECT	22MF	20%	50V
C401	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C402	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C403	1-124-927-11	ELECT	4.7MF	20%	50V
C404	1-124-927-11	ELECT	4.7MF	20%	50V
C405	1-164-346-11	CERAMIC CHIP	1MF		16V
C406	1-163-989-11	CERAMIC CHIP	0.033MF	10%	25V
C701	1-124-925-11	ELECT	2.2MF	20%	50V
C702	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C703	1-126-935-11	ELECT	470MF	20%	16V
C704	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C801	1-126-933-11	ELECT	100MF	20%	16V
C802	1-126-933-11	ELECT	100MF	20%	16V
C803	1-126-933-11	ELECT	100MF	20%	16V
C804	1-126-933-11	ELECT	100MF	20%	16V

<CONNECTOR>

CN53	*1-766-305-11	PIN, PC CONNECTOR 96P

<DIODE>

D1	8-719-900-95	DIODE V09G
D2	8-719-900-95	DIODE V09G
D3	8-719-106-71	DIODE RD12M-B2
D4	8-719-801-78	DIODE 1SS184
D5	8-719-105-82	DIODE RD5.1M-B2
D6	8-719-801-78	DIODE 1SS184
D7	8-719-801-78	DIODE 1SS184
D8	8-719-104-34	DIODE 1S2836
D9	8-719-948-45	DIODE ERA22-08
D10	8-719-801-78	DIODE 1SS184
D11	8-719-801-78	DIODE 1SS184
D12	8-719-801-78	DIODE 1SS184
D13	8-719-801-78	DIODE 1SS184
D14	8-719-104-34	DIODE 1S2836
D15	8-719-801-78	DIODE 1SS184
D16	8-719-801-78	DIODE 1SS184
D17	8-719-800-76	DIODE 1SS226
D18	8-719-801-78	DIODE 1SS184
D19	8-719-801-78	DIODE 1SS184
D20	8-719-801-78	DIODE 1SS184
D201	8-719-801-78	DIODE 1SS184
D401	8-719-801-78	DIODE 1SS184
D402	8-719-801-78	DIODE 1SS184
D501	8-719-800-76	DIODE 1SS226
D701	8-719-801-78	DIODE 1SS184
D801	8-719-900-95	DIODE V09G
D802	8-719-900-95	DIODE V09G

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC1	8-759-231-58	IC NJM7812FA	
IC2	8-759-700-69	IC NJM79L12A	
IC3	8-759-300-78	IC HD14538BFP	
IC4	8-759-100-96	IC UPC4558G2	
IC5	8-759-009-46	IC MC14528BF	
IC6	8-759-100-96	IC UPC4558G2	
IC7	8-759-100-93	IC UPC393G2	
IC8	8-759-300-78	IC HD14538BFP	
IC9	8-759-114-06	IC UPC814G2-1	
IC10	8-759-300-78	IC HD14538BFP	
IC11	8-759-100-93	IC UPC393G2	
IC12	8-759-300-71	IC HD14053BFP	
IC13	8-759-300-78	IC HD14538BFP	
IC14	8-759-105-49	IC UPC319G2	
IC15	8-749-922-79	IC MC-8638	
IC16	8-749-010-15	IC MC-8639A	
IC17	8-759-114-06	IC UPC814G2-1	
IC18	8-759-114-06	IC UPC814G2-1	
IC19	8-759-300-78	IC HD14538BFP	
IC20	8-759-114-06	IC UPC814G2-1	
IC21	8-759-114-06	IC UPC814G2-1	
IC22	8-759-100-60	IC UPC1377C	
IC23	8-759-114-06	IC UPC814G2-1	
IC24	8-759-100-96	IC UPC4558G2	
IC201	8-752-065-69	IC CXA1470AS	
IC202	8-759-925-74	IC SN74HC04ANS	
IC203	8-759-114-06	IC UPC814G2-1	
IC204	8-759-100-96	IC UPC4558G2	
IC205	8-759-984-88	IC LM6361M	
IC206	8-759-114-06	IC UPC814G2-1	
IC207	8-759-100-96	IC UPC4558G2	
IC208	8-759-984-88	IC LM6361M	
IC209	8-759-984-88	IC LM6361M	
IC210	8-752-068-37	IC CXA1726AM	
IC211	8-759-114-06	IC UPC814G2-1	
IC401	8-759-114-06	IC UPC814G2-1	
IC402	8-759-926-11	IC SN74HC138ANS	
IC601	8-759-100-96	IC UPC4558G2	
IC801	8-759-144-82	IC UPC2405HF	
IC802	8-759-247-67	IC LM2990T-5.0	

<CONDUCTOR CHIP>

JR1	1-216-295-91	CONDUCTOR, CHIP

<COIL>

L1	1-412-533-21	INDUCTOR	47UH
L2	1-412-533-21	INDUCTOR	47UH
L801	1-412-533-21	INDUCTOR	47UH
L802	1-412-533-21	INDUCTOR	47UH

<TRANSISTOR>

Q1	8-729-230-49	TRANSISTOR 2SC2712-YG
Q2	8-729-216-22	TRANSISTOR 2SA1162-G
Q3	8-729-230-49	TRANSISTOR 2SC2712-YG
Q4	8-729-216-22	TRANSISTOR 2SA1162-G
Q5	8-729-230-49	TRANSISTOR 2SC2712-YG
Q6	8-729-230-49	TRANSISTOR 2SC2712-YG
Q7	8-729-216-22	TRANSISTOR 2SA1162-G
Q8	8-729-216-22	TRANSISTOR 2SA1162-G
Q9	8-729-105-74	TRANSISTOR 2SK523-M1
Q10	8-729-216-22	TRANSISTOR 2SA1162-G
Q11	8-729-216-22	TRANSISTOR 2SA1162-G
Q12	8-729-216-22	TRANSISTOR 2SA1162-G
Q13	8-729-230-49	TRANSISTOR 2SC2712-YG
Q14	8-729-901-01	TRANSISTOR DTC144EK
Q15	8-729-230-49	TRANSISTOR 2SC2712-YG
Q16	8-729-926-23	TRANSISTOR FMW5
Q17	8-729-230-49	TRANSISTOR 2SC2712-YG
Q18	8-729-230-49	TRANSISTOR 2SC2712-YG
Q19	8-729-904-04	TRANSISTOR FMS2
Q20	8-729-926-23	TRANSISTOR FMW5
Q21	8-729-230-49	TRANSISTOR 2SC2712-YG
Q22	8-729-901-01	TRANSISTOR DTC144EK

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q24	8-729-901-01	TRANSISTOR DTC144EK	
Q25	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q26	8-729-216-22	TRANSISTOR 2SA1162-G	
Q27	8-729-901-01	TRANSISTOR DTC144EK	
Q28	8-729-901-01	TRANSISTOR DTC144EK	
Q29	8-729-216-22	TRANSISTOR 2SA1162-G	
Q31	8-729-901-01	TRANSISTOR DTC144EK	
Q32	8-729-901-01	TRANSISTOR DTC144EK	
Q33	8-729-422-29	TRANSISTOR 2SD601A-S	
Q34	8-729-901-06	TRANSISTOR DTA144EK	
Q35	8-729-901-01	TRANSISTOR DTC144EK	
Q201	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q202	8-729-216-22	TRANSISTOR 2SA1162-G	
Q203	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q204	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q205	8-729-926-23	TRANSISTOR FMW5	
Q206	8-729-216-22	TRANSISTOR 2SA1162-G	
Q207	8-729-902-96	TRANSISTOR FMS1	
Q208	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q209	8-729-926-23	TRANSISTOR FMW5	
Q210	8-729-216-22	TRANSISTOR 2SA1162-G	
Q211	8-729-902-96	TRANSISTOR FMS1	
Q212	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q213	8-729-926-23	TRANSISTOR FMW5	
Q214	8-729-216-22	TRANSISTOR 2SA1162-G	
Q215	8-729-902-96	TRANSISTOR FMS1	
Q216	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q217	8-729-902-96	TRANSISTOR FMS1	
Q218	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q219	8-729-926-23	TRANSISTOR FMW5	
Q220	8-729-216-22	TRANSISTOR 2SA1162-G	
Q221	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q222	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q223	8-729-216-22	TRANSISTOR 2SA1162-G	
Q401	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q402	8-729-216-22	TRANSISTOR 2SA1162-G	
Q403	8-729-901-01	TRANSISTOR DTC144EK	
Q404	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q501	8-729-105-74	TRANSISTOR 2SK523-M1	
Q701	8-729-903-82	TRANSISTOR FMW2	
Q702	8-729-920-59	TRANSISTOR IMX2	
Q703	8-729-904-04	TRANSISTOR FMS2	
Q704	8-729-926-23	TRANSISTOR FMW5	
Q705	8-729-926-23	TRANSISTOR FMW5	
Q706	8-729-920-59	TRANSISTOR IMX2	
Q707	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q708	8-729-216-22	TRANSISTOR 2SA1162-G	
Q709	8-729-904-04	TRANSISTOR FMS2	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
R1	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R2	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R3	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R4	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R5	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R6	1-216-695-11	METAL CHIP 68K 0.50% 1/10W	
R7	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R8	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R9	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R10	1-216-109-00	METAL GLAZE 330K 5% 1/10W	
R11	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R12	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R13	1-216-699-11	METAL CHIP 100K 0.50% 1/10W	
R14	1-216-099-00	METAL GLAZE 120K 5% 1/10W	
R15	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R16	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R17	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R18	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R19	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R20	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R21	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R22	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R23	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R24	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R25	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R26	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R27	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R28	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R29	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R30	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R31	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R32	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R33	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R34	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R35	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R36	1-216-097-91	METAL GLAZE 100K 5% 1/10W	
R37	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R38	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R39	1-216-043-91	METAL GLAZE 560 5% 1/10W	
R40	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R41	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R42	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R43	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R44	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R45	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R46	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R47	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R48	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R49	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R50	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R51	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R52	1-216-687-11	METAL CHIP 33K 0.50% 1/10W	
R53	1-216-663-11	METAL CHIP 3.3K 0.50% 1/10W	
R54	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
R55	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
R56	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R57	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R58	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R59	1-208-822-11	METAL CHIP 47K 0.50% 1/10W	
R60	1-208-800-11	METAL CHIP 5.6K 0.50% 1/10W	
R61	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R62	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
R63	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
R64	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R65	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R67	1-216-097-91	METAL GLAZE 100K 5% 1/10W	
R68	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R69	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R70	1-208-814-11	METAL CHIP 22K 0.50% 1/10W	
R71	1-208-814-11	METAL CHIP 22K 0.50% 1/10W	
R72	1-218-756-11	METAL CHIP 150K 0.50% 1/10W	
R73	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R74	1-208-824-11	METAL CHIP 56K 0.50% 1/10W	
R75	1-216-695-11	METAL CHIP 68K 0.50% 1/10W	
R76	1-218-756-11	METAL CHIP 150K 0.50% 1/10W	
R77	1-216-079-00	METAL GLAZE 18K 5% 1/10W	

DA

REF.NO.	PART NO.	DESCRIPTION				REMARK
R78	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R79	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R80	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R81	1-218-758-11	METAL CHIP	180K	0.50%	1/10W	
R82	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R83	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R84	1-218-756-11	METAL CHIP	150K	0.50%	1/10W	
R85	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R86	1-216-697-91	METAL CHIP	82K	0.50%	1/10W	
R87	1-208-824-11	METAL CHIP	56K	0.50%	1/10W	
R88	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R89	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R90	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R91	1-218-758-11	METAL CHIP	180K	0.50%	1/10W	
R92	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R93	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R94	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R95	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R96	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R97	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R98	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R99	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R100	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R101	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R102	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R103	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R104	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R105	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R106	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R107	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R108	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R109	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R110	1-208-800-11	METAL CHIP	5.6K	0.50%	1/10W	
R111	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R112	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R113	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R114	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R115	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R116	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R117	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R118	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R119	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R120	1-216-635-11	METAL CHIP	220	0.50%	1/10W	
R121	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R122	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R123	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R124	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R125	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R126	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R127	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R128	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R129	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R130	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R131	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R132	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R133	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R134	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R135	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R136	1-216-635-11	METAL CHIP	220	0.50%	1/10W	
R137	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R138	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R139	1-218-754-11	METAL CHIP	120K	0.50%	1/10W	
R140	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R141	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R142	1-216-047-91	METAL GLAZE	820	5%	1/10W	
R143	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R144	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R145	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R146	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R147	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R148	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R149	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R150	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R151	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R152	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R153	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R154	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R155	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R156	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R157	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R158	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R159	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R160	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R161	1-216-697-91	METAL CHIP	82K	0.50%	1/10W	
R162	1-216-697-91	METAL CHIP	82K	0.50%	1/10W	
R163	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R164	1-216-697-91	METAL CHIP	82K	0.50%	1/10W	
R165	1-216-697-91	METAL CHIP	82K	0.50%	1/10W	
R166	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W	
R167	1-216-697-91	METAL CHIP	82K	0.50%	1/10W	
R168	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R169	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R170	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R171	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R172	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R173	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	
R174	1-216-649-11	METAL CHIP	820	0.50%	1/10W	
R175	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R176	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R177	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R178	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R179	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R180	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R181	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R182	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R183	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R184	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R185	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R186	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R187	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R188	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R189	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R190	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R191	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R192	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R194	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R196	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R198	1-216-105-91	METAL GLAZE	220K	5%	1/10W	
R199	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R200	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R201	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R202	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R203	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R204	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R205	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R207	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R208	1-216-049-91	METAL GLAZE	1K	5%	1/10W	

DA

REF.NO.	PART NO.	DESCRIPTION				REMARK
R209	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R210	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R211	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R212	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R213	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R214	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R215	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R216	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R217	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R218	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R219	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R220	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R221	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R222	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R223	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R224	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R225	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R226	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R227	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R228	1-208-823-11	METAL CHIP	51K	0.50%	1/10W	
R229	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R230	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R231	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R232	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R233	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R234	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R235	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R236	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R237	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R238	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R239	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R240	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R241	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R242	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R243	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R244	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R245	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R246	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R247	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R248	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W	
R249	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R250	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R251	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R252	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R253	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R254	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R255	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R256	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R257	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R258	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R259	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R260	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R261	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R262	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R263	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R264	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R265	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R266	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R267	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R268	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R269	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R270	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R271	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R272	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R273	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R274	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R275	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R276	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R277	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R278	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R279	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R280	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R281	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R282	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R283	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R284	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R285	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R286	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R287	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R288	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R289	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R290	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R291	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R292	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R293	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R294	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R295	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R296	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R297	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R298	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R299	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R300	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R301	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R302	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R303	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R304	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R305	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R306	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R307	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R308	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R309	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R310	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R311	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R312	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R313	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R314	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R315	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R316	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R317	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R318	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R319	1-216-295-91	CONDUCTOR, CHIP				
R320	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R321	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R322	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R323	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R324	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R325	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R326	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R328	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R329	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R330	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R331	1-216-105-91	METAL GLAZE	220K	5%	1/10W	
R332	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R335	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R337	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R338	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R339	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R340	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R341	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R342	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R343	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R344	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R345	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R401	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R402	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R403	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R404	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R405	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R406	1-218-756-11	METAL CHIP	150K	0.50%	1/10W	
R407	1-218-754-11	METAL CHIP	120K	0.50%	1/10W	
R408	1-216-689-11	METAL CHIP	39K	0.50%	1/10W	
R409	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R410	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R411	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R412	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R413	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R414	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R415	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R416	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R417	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R418	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R419	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R420	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R501	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R502	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R503	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R504	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R701	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R702	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R703	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R704	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R705	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R706	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R707	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R708	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R709	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R710	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R711	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R712	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R713	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R714	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R715	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R716	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R717	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R718	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R719	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R720	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R721	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R722	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R723	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R724	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R725	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R726	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R727	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R728	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R729	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R730	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R732	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R733	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R734	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R735	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R736	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R737	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R738	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R739	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	

<VARIABLE RESISTOR>

RV1	1-238-787-11	RES, ADJ, CERMET	10K
RV2	1-238-787-11	RES, ADJ, CERMET	10K
RV3	1-238-785-21	RES, ADJ, CERMET	2K
RV4	1-238-789-11	RES, ADJ, CERMET	50K
RV5	1-238-789-11	RES, ADJ, CERMET	50K
RV6	1-223-479-11	RES, ADJ, CERMET	2K
RV7	1-238-790-11	RES, ADJ, CERMET	100K

<SWITCH>

S1	1-570-865-11	SWITCH, SLIDE
S2	1-570-865-11	SWITCH, SLIDE

****

*A-1346-345-A DE BOARD, COMPLETE
****

<CAPACITOR>

C402	1-126-964-11	ELECT	10MF	20%	50V
C403	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C404	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C405	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C406	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C407	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C408	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C409	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C410	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C411	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C412	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C413	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C414	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C415	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C416	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C419	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C420	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C421	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C422	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C423	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C424	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C425	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C426	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C427	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C428	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C429	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C430	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C431	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C432	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C433	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C434	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C435	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C436	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C437	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C438	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C439	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C440	1-163-031-11	CERAMIC CHIP	0.01MF		50V

REF.NO.	PART NO.	DESCRIPTION	REMARK
C441	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C442	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C443	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C444	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C445	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C446	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C447	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C448	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C650	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C651	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C652	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C653	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C654	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C655	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C700	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C701	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C702	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C703	1-126-964-11	ELECT 10MF 20%	50V
C704	1-126-964-11	ELECT 10MF 20%	50V
C705	1-124-927-11	ELECT 4.7MF 20%	50V
C706	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C707	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C708	1-104-913-11	TANTAL. CHIP 10MF 20%	16V
C709	1-126-964-11	ELECT 10MF 20%	50V
C710	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C711	1-136-155-00	FILM 0.015MF 5%	50V
C712	1-136-159-00	FILM 0.033MF 5%	50V
C713	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C714	1-124-927-11	ELECT 4.7MF 20%	50V
C715	1-124-902-00	ELECT 0.47MF 20%	50V
C716	1-136-165-00	FILM 0.1MF 5%	50V
C717	1-136-161-00	FILM 0.047MF 5%	50V
C718	1-124-903-11	ELECT 1MF 20%	50V
C719	1-126-964-11	ELECT 10MF 20%	50V
C720	1-126-964-11	ELECT 10MF 20%	50V
C721	1-126-964-11	ELECT 10MF 20%	50V
C725	1-126-964-11	ELECT 10MF 20%	50V
C726	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C727	1-126-964-11	ELECT 10MF 20%	50V
C728	1-126-964-11	ELECT 10MF 20%	50V
C729	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C730	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C733	1-126-964-11	ELECT 10MF 20%	50V
C734	1-126-964-11	ELECT 10MF 20%	50V
C735	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C736	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C737	1-126-964-11	ELECT 10MF 20%	50V
C738	1-126-964-11	ELECT 10MF 20%	50V
C739	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C740	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C741	1-126-964-11	ELECT 10MF 20%	50V
C742	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C743	1-126-964-11	ELECT 10MF 20%	50V
C744	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C745	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C746	1-126-964-11	ELECT 10MF 20%	50V
C747	1-126-964-11	ELECT 10MF 20%	50V
C748	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C749	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C750	1-126-964-11	ELECT 10MF 20%	50V
C751	1-126-964-11	ELECT 10MF 20%	50V
C752	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C900	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C901	1-163-031-11	CERAMIC CHIP 0.01MF	50V

REF.NO.	PART NO.	DESCRIPTION	REMARK
C902	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C903	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C904	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C905	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C906	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C907	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C908	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C909	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C910	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C911	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C912	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C913	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C914	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C915	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C916	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C917	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C980	1-126-967-11	ELECT 47MF 20%	16V
C981	1-126-933-11	ELECT 100MF 20%	16V
C982	1-126-933-11	ELECT 100MF 20%	16V
C983	1-126-933-11	ELECT 100MF 20%	16V
C984	1-126-933-11	ELECT 100MF 20%	16V
C985	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C986	1-126-933-11	ELECT 100MF 20%	16V
C987	1-126-933-11	ELECT 100MF 20%	16V
C988	1-163-031-11	CERAMIC CHIP 0.01MF	50V

<CONNECTOR>

CN55	*1-766-305-11	PIN, PC CONNECTOR 96P	

<DIODE>

D352	8-719-800-76	DIODE 1SS226	
D501	8-719-900-95	DIODE V09G	
D502	8-719-900-95	DIODE V09G	
D503	8-719-911-19	DIODE 1SS119-25	
D505	8-719-106-17	DIODE RD6.8M-B2	
D506	8-719-106-17	DIODE RD6.8M-B2	
D507	8-719-106-17	DIODE RD6.8M-B2	
D508	8-719-106-17	DIODE RD6.8M-B2	

<IC>

IC501	8-759-144-82	IC UPC2405HF	
IC502	8-759-247-67	IC UPC2405HF	
IC503	8-759-042-02	IC S-80743AL-A7-S	
IC504	8-752-068-37	IC CXA1726AM	
IC505	8-752-068-37	IC CXA1726AM	
IC506	8-752-068-37	IC CXA1726AM	
IC507	8-759-287-83	IC SN74HC74ANS	
IC508	8-759-925-74	IC SN74HC04ANS	
IC509	8-752-065-69	IC CXA1470AS	
IC510	8-759-114-06	IC UPC814G2-1	
IC511	8-759-114-06	IC UPC814G2-1	
IC512	8-759-114-06	IC UPC814G2-1	
IC513	8-752-068-37	IC CXA1726AM	
IC514	8-752-068-37	IC CXA1726AM	
IC515	8-752-068-37	IC CXA1726AM	
IC516	8-752-068-37	IC CXA1726AM	
IC517	8-759-926-48	IC SN74HC244ANS	
IC518	8-759-926-67	IC SN74HC374ANS	
IC519	8-759-267-60	IC UPD74HC238GS-E2	
IC520	8-759-267-60	IC UPD74HC238GS-E2	

DE

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC521	8-759-267-60	IC UPD74HC238GS-E2	
IC522	8-759-925-76	IC SN74HC08ANS	
IC523	8-759-326-65	IC MP7670AS-TE2	
IC524	8-759-326-65	IC MP7670AS-TE2	
IC525	8-759-326-65	IC MP7670AS-TE2	
IC526	8-759-326-65	IC MP7670AS-TE2	
IC527	8-759-326-65	IC MP7670AS-TE2	
IC528	8-759-326-65	IC MP7670AS-TE2	
IC529	8-759-326-65	IC MP7670AS-TE2	
IC530	8-759-326-65	IC MP7670AS-TE2	
IC531	8-759-326-65	IC MP7670AS-TE2	
IC532	8-759-326-65	IC MP7670AS-TE2	
IC533	8-759-326-65	IC MP7670AS-TE2	
IC534	8-759-326-65	IC MP7670AS-TE2	
IC535	8-759-326-65	IC MP7670AS-TE2	
IC536	8-759-326-65	IC MP7670AS-TE2	
IC537	8-759-326-65	IC MP7670AS-TE2	
IC538	8-759-326-65	IC MP7670AS-TE2	
IC539	8-759-326-65	IC MP7670AS-TE2	
IC540	8-759-326-65	IC MP7670AS-TE2	
IC541	8-759-326-65	IC MP7670AS-TE2	
IC542	8-759-326-65	IC MP7670AS-TE2	
IC543	8-759-326-65	IC MP7670AS-TE2	
IC544	8-759-326-65	IC MP7670AS-TE2	
IC545	8-759-908-15	IC TL431CLP	
IC601	8-759-114-06	IC UPC814G2-1	
IC602	8-759-114-06	IC UPC814G2-1	
IC603	8-759-114-06	IC UPC814G2-1	
IC604	8-759-114-06	IC UPC814G2-1	
IC605	8-759-114-06	IC UPC814G2-1	
IC606	8-759-114-06	IC UPC814G2-1	
IC607	8-759-114-06	IC UPC814G2-1	
IC608	8-759-114-06	IC UPC814G2-1	
IC609	8-759-114-06	IC UPC814G2-1	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L980	1-412-533-21	INDUCTOR 47UH	
L981	1-412-533-21	INDUCTOR 47UH	
L982	1-412-533-21	INDUCTOR 47UH	
L983	1-412-533-21	INDUCTOR 47UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q501	8-729-926-23	TRANSISTOR FMW5	
Q502	8-729-920-39	TRANSISTOR IMT1US	
Q503	8-729-926-23	TRANSISTOR FMW5	
Q504	8-729-901-06	TRANSISTOR DTA144EK	
Q505	8-729-901-01	TRANSISTOR DTC144EK	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
R400	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R401	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R402	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R403	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R404	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R405	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R406	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R407	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R408	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R409	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R410	1-216-671-11	METAL CHIP 6.8K 0.50% 1/10W	
R411	1-216-671-11	METAL CHIP 6.8K 0.50% 1/10W	
R412	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R413	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R414	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R415	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R416	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R417	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R418	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R419	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R420	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R421	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R422	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R423	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R424	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R425	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R426	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R427	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R428	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R429	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R430	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R431	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R432	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R433	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R434	1-216-671-11	METAL CHIP 6.8K 0.50% 1/10W	
R435	1-216-671-11	METAL CHIP 6.8K 0.50% 1/10W	
R436	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R437	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R438	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R439	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R440	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R441	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R442	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R443	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R444	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R445	1-216-671-11	METAL CHIP 6.8K 0.50% 1/10W	
R446	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R447	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R448	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R449	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R450	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R451	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R452	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R453	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R454	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R455	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R456	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R457	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R458	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R459	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R460	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R461	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R462	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R463	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R464	1-216-671-11	METAL CHIP 6.8K 0.50% 1/10W	
R465	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R466	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R467	1-208-800-11	METAL CHIP 5.6K 0.50% 1/10W	
R468	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R469	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R470	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R471	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R472	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R473	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R474	1-208-810-11	METAL CHIP 15K 0.50% 1/10W	
R475	1-216-673-11	METAL CHIP 8.2K 0.50% 1/10W	

DE

REF.NO.	PART NO.	DESCRIPTION				REMARK
R476	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	
R477	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R478	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R479	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	
R480	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	
R481	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	
R482	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	
R483	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R484	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R485	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	
R486	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	
R487	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R488	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R489	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R490	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R491	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R492	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R493	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R494	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R495	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R496	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R497	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R498	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R499	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R500	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R501	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R502	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R503	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R504	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R505	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R506	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R507	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R508	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R509	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R510	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R511	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R512	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R513	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R514	1-208-800-11	METAL CHIP	5.6K	0.50%	1/10W	
R515	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R516	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R517	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R518	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R519	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	
R520	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R521	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	
R522	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	
R523	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R524	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	
R525	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R526	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R527	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R528	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R529	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R530	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R531	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R532	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R533	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R534	1-208-800-11	METAL CHIP	5.6K	0.50%	1/10W	
R535	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R536	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R537	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R538	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R539	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R540	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R541	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R542	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R543	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R544	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R545	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R546	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R547	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R548	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R549	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R550	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R551	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R552	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R553	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R554	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R555	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R556	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R557	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R558	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R559	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R560	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R561	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R562	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R563	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R564	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R565	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R566	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R567	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R568	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R569	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R570	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R571	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R572	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R573	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R574	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R575	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R576	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R577	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R578	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R579	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R580	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R581	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R582	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R583	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R584	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R585	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R586	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R587	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R588	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R589	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R590	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R591	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R592	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R593	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R594	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R595	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R596	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R597	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R598	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R599	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R600	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R601	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R602	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	

DE

REF.NO.	PART NO.	DESCRIPTION				REMARK
R603	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R604	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R605	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R606	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R607	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R608	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R609	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R650	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R651	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R652	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R653	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R654	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R655	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R656	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R657	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R658	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R659	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R660	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R661	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R662	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R663	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R664	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R665	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R666	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R667	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R668	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R669	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R670	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R671	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R672	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R673	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R674	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R675	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R676	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R677	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R678	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R679	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R680	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R700	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R701	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R702	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R703	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R704	1-208-823-11	METAL CHIP	51K	0.50%	1/10W	
R705	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R706	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R707	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R708	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R709	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R710	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R711	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R712	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R713	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R714	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R715	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R716	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R717	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R718	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R719	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R720	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R721	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R722	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R723	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R724	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R725	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R726	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R727	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R728	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R729	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R730	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R731	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R732	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R733	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R734	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R735	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R736	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R737	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R738	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R739	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R740	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R741	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R742	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W	
R743	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W	
R744	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R745	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R746	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R747	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R748	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W	
R749	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R750	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R751	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	
R752	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R753	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R754	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R755	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R756	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R757	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R758	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R759	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R760	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R761	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R762	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R763	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R764	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R765	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R766	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R767	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R768	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R769	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R770	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R771	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R772	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R773	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R774	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R775	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R776	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	
R777	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R778	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R779	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R780	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R781	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R782	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R783	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R784	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W	
R785	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R786	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R787	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R788	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	

DE

REF.NO.	PART NO.	DESCRIPTION				REMARK
R789	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R790	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R791	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R792	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R793	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W	
R794	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R795	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R796	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R797	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R798	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R799	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R800	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R801	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R802	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R803	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R804	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R805	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R806	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R807	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R808	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R809	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R810	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R811	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R812	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R813	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W	
R814	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R815	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R816	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R817	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R818	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R819	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R820	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R821	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R822	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R823	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R824	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R825	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R826	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R827	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R828	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R829	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R830	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R831	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R832	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R833	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R834	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R835	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R836	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R837	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R838	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W	
R839	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R840	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R841	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R842	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R843	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R844	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R845	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R846	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R847	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R848	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R849	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R850	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R851	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R852	1-216-073-00	METAL GLAZE	10K	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R853	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R854	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R855	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R856	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R857	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R858	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R859	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R860	1-208-800-11	METAL CHIP	5.6K	0.50%	1/10W	
R861	1-216-695-11	METAL CHIP	68K	0.50%	1/10W	
R862	1-208-800-11	METAL CHIP	5.6K	0.50%	1/10W	
R863	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R864	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R900	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R901	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R902	1-216-639-11	METAL CHIP	330	0.50%	1/10W	
R903	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R904	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R905	1-216-639-11	METAL CHIP	330	0.50%	1/10W	
R906	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R907	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R908	1-216-639-11	METAL CHIP	330	0.50%	1/10W	
R909	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R910	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R911	1-216-639-11	METAL CHIP	330	0.50%	1/10W	
R912	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R913	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R914	1-216-639-11	METAL CHIP	330	0.50%	1/10W	
R915	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R916	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R917	1-216-639-11	METAL CHIP	330	0.50%	1/10W	
R918	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R919	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R920	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R921	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R922	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R923	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R924	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R925	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R926	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R927	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R928	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R929	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R930	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R931	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R932	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R933	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R934	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R935	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R936	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R937	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R938	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R939	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R940	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R941	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R942	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R943	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R944	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R945	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R946	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R947	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R948	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R949	1-216-627-11	METAL CHIP	100	0.50%	1/10W	
R950	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	

REF.NO.	PART NO.	DESCRIPTION			REMARK
R951	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R952	1-216-627-11	METAL CHIP	100	0.50%	1/10W
R953	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R980	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W

<VARIABLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
RV701	1-238-789-11	RES, ADJ, CERMET 50K	
RV702	1-238-791-11	RES, ADJ, CERMET 200K	
RV703	1-238-789-11	RES, ADJ, CERMET 50K	

****

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1346-397-A	EBB BOARD, COMPLETE ******************** (EBA BOARD INCLUDING)	
	4-050-625-11	HOLDER (EB), TR	

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C700	1-128-551-11	ELECT	22MF	20%	63V
C701	1-128-554-11	ELECT	330MF	20%	63V
C702	1-102-050-00	CERAMIC	0.01MF	99%	500V
C703	1-126-964-11	ELECT	10MF	20%	50V
C704	1-126-964-11	ELECT	10MF	20%	50V
C705	1-126-933-11	ELECT	100MF	20%	16V
C706	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C707	1-126-964-11	ELECT	10MF	20%	50V
C708	1-126-964-11	ELECT	10MF	20%	50V
C709	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C710	1-102-947-00	CERAMIC	10PF	0.5PF	50V
C711	1-163-025-11	CERAMIC CHIP	0.001MF		50V
C712	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C713	1-126-933-11	ELECT	100MF	20%	16V
C714	1-102-050-00	CERAMIC	0.01MF	99%	500V
C715	1-128-551-11	ELECT	22MF	20%	63V
C716	1-128-554-11	ELECT	330MF	20%	63V
C717	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C718	1-126-967-11	ELECT	47MF	20%	50V
C719	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C720	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C721	1-163-989-11	CERAMIC CHIP	0.033MF	10%	25V
C722	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C723	1-136-169-00	FILM	0.22MF	5%	50V
C724	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C725	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C726	1-126-967-11	ELECT	47MF	20%	50V
C1200	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1201	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1202	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1203	1-124-903-11	ELECT	1MF	20%	50V
C1204	1-102-038-00	CERAMIC	0.001MF		500V
C1205	1-128-551-11	ELECT	22MF	20%	50V
C1206	1-102-038-00	CERAMIC	0.001MF		500V
C1207	1-126-964-11	ELECT	10MF	20%	50V
C1208	1-137-217-11	FILM	0.01MF	5%	0
C1209	1-107-660-11	ELECT	4.7MF	20%	350V
C1210	1-101-003-00	CERAMIC	0.0047MF		50V
C1211	1-101-002-00	CERAMIC	0.0022MF		50V
C1212	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1213	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1214	1-124-903-11	ELECT	1MF	20%	50V
C1215	1-126-964-11	ELECT	10MF	20%	50V
C1216	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1217	1-128-551-11	ELECT	22MF	20%	50V
C1218	1-163-034-00	CERAMIC CHIP	0.033MF		50V
C1219	1-126-964-11	ELECT	10MF	20%	50V
C1220	1-126-933-11	ELECT	100MF	20%	16V
C1221	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1222	1-128-551-11	ELECT	22MF	20%	50V
C1223	1-109-889-11	ELECT	1MF	20%	50V
C1224	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1225	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1226	1-126-964-11	ELECT	10MF	20%	50V
C1227	1-126-933-11	ELECT	100MF	20%	16V
C1228	1-164-222-11	CERAMIC CHIP	0.22MF		25V
C1229	1-107-660-11	ELECT	4.7MF	20%	350V
C1230	1-107-642-91	ELECT	3.3MF	20%	200V
C1231	1-102-050-00	CERAMIC	0.01MF	99%	500V
C1232	1-102-050-00	CERAMIC	0.01MF	99%	500V
C1233	1-107-643-91	ELECT	4.7MF	20%	200V
C1234	1-107-675-11	ELECT	1MF	20%	160V
C1235	1-128-551-11	ELECT	22MF	20%	50V
C1236	1-124-915-11	ELECT	10MF	20%	63V
C1237	1-107-636-11	ELECT	10MF	20%	160V
C1238	1-107-636-11	ELECT	10MF	20%	160V

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN409	*1-564-510-11	PLUG, CONNECTOR 7P	
CN410	*1-564-506-11	PLUG, CONNECTOR 3P	
CN411	*1-774-247-11	CONNECTOR, BOARD TO BOARD 5P	
CN412	1-564-524-11	PLUG, CONNECTOR 9P	
CN512	1-774-114-11	CONNECTOR, FPC (DIP TYPE) 24P	
CN513	*1-564-528-11	PLUG, CONNECTOR 13P	
CN514	*1-564-527-11	PLUG, CONNECTOR 12P	
CN515	*1-564-515-11	PLUG, CONNECTOR 12P	
CN516	*1-564-516-11	PLUG, CONNECTOR 12P	
CN517	*1-564-528-11	PLUG, CONNECTOR 13P	
CN518	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	
CN519	*1-506-108-41	PIN, CONNECTOR (TERMINAL PIN)	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D700	8-719-900-95	DIODE V09G	
D701	8-719-911-19	DIODE 1SS119-25	
D1200	8-719-901-83	DIODE 1SS83	
D1201	8-719-901-19	DIODE V11N	
D1202	8-719-901-83	DIODE 1SS83	
D1204	8-719-901-83	DIODE 1SS83	
D1205	8-719-900-95	DIODE V09G	
D1206	8-719-105-82	DIODE RD5.1M-B2	
D1207	8-719-900-95	DIODE V09G	
D1208	8-719-900-95	DIODE V09G	
D1209	8-719-105-82	DIODE RD5.1M-B2	
D1210	8-719-106-71	DIODE RD12M-B2	
D1211	8-719-801-78	DIODE 1SS184	
D1212	8-719-900-95	DIODE V09G	
D1213	8-719-900-95	DIODE V09G	
D1214	8-719-900-95	DIODE V09G	
D1215	8-719-106-89	DIODE RD15M-B2	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC700	8-759-700-69	IC NJM79L12A	
IC701	8-759-231-58	IC TA7812S	
IC702	8-759-114-06	IC UPC814G2-1	
IC703	8-759-100-96	IC UPC4558G2	

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC704	8-759-336-63	IC LM675T	
IC1200	8-759-231-58	IC NJM7812FA	
IC1201	8-759-708-12	IC NJM78L12A	
IC1202	8-759-100-96	IC UPC4558G2	
IC1203	8-759-701-88	IC NJM7912FA	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L700	1-459-155-00	COIL (WITH CORE) 45UH	
L701	1-459-155-00	COIL (WITH CORE) 45UH	
L1200	1-408-879-21	INDUCTOR 0.47UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q700	8-729-207-89	TRANSISTOR 2SA1358-Y	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
Q701	8-729-142-74	TRANSISTOR 2SD1977	
Q702	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q703	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q704	8-729-142-70	TRANSISTOR 2SB1315	
Q705	8-729-207-82	TRANSISTOR 2SC3421-Y	
Q1200	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1201	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1202	8-729-801-88	TRANSISTOR 2SA1381-E	
Q1203	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1204	8-729-801-99	TRANSISTOR 2SC3503-F	
Q1205	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1206	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1207	8-729-801-99	TRANSISTOR 2SC3503-F	
Q1208	8-729-031-68	TRANSISTOR 2SC4630LS	
Q1209	8-729-801-99	TRANSISTOR 2SC3503-F	
Q1210	8-729-031-68	TRANSISTOR 2SC4630LS	
Q1211	8-729-901-01	TRANSISTOR DTC144EK	
Q1212	8-729-901-01	TRANSISTOR DTC144EK	
Q1213	8-729-901-01	TRANSISTOR DTC144EK	
Q1214	8-729-901-01	TRANSISTOR DTC144EK	
Q1215	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1216	8-729-901-01	TRANSISTOR DTC144EK	
Q1217	8-729-801-99	TRANSISTOR 2SC3503-F	
Q1218	8-729-901-01	TRANSISTOR DTC144EK	
Q1219	8-729-903-68	TRANSISTOR 2SD982	
Q1220	8-729-903-68	TRANSISTOR 2SD982	
Q1221	8-729-903-68	TRANSISTOR 2SD982	
Q1222	8-729-801-88	TRANSISTOR 2SA1381-E	
Q1223	8-729-801-88	TRANSISTOR 2SA1381-E	
Q1224	8-729-801-88	TRANSISTOR 2SA1381-E	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R700	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R701	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R702	1-216-623-11	METAL CHIP	68	0.50%	1/10W	
R703	1-249-393-11	CARBON	10	5%	1/4W	F
R704	1-216-647-11	METAL CHIP	680	0.50%	1/10W	
R705	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R706	1-215-873-00	METAL OXIDE	4.7K	5%	1W	F
R707	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R708	1-247-764-11	CARBON	10K	5%	1/2W	
R709	1-247-688-11	CARBON	10	5%	1/4W	F
R710	1-249-377-11	CARBON	0.47	5%	1/4W	F
R711	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R712	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R713	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R714	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R715	1-249-377-11	CARBON	0.47	5%	1/4W	F
R716	1-247-688-11	CARBON	10	5%	1/4W	F
R717	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R718	1-215-915-11	METAL OXIDE	470	5%	3W	F
R719	1-215-915-11	METAL OXIDE	470	5%	3W	F
R720	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W	
R721	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R722	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R723	1-216-633-11	METAL CHIP	180	0.50%	1/10W	
R724	1-215-917-11	METAL OXIDE	1K	5%	3W	F
R725	1-216-369-00	METAL OXIDE	1	5%	2W	F
R726	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R727	1-249-393-11	CARBON	10	5%	1/4W	F
R730	1-216-295-91	CONDUCTOR, CHIP				
R731	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R734	1-216-295-91	CONDUCTOR, CHIP				
R735	1-249-389-11	CARBON	4.7	5%	1/4W	F
R736	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R737	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R738	1-208-800-11	METAL CHIP	5.6K	0.50%	1/10W	
R739	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R740	1-249-389-11	CARBON	4.7	5%	1/4W	
R741	1-249-380-11	CARBON	0.82	5%	1/4W	F
R742	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R744	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R745	1-215-923-00	METAL OXIDE	10K	5%	3W	F
R746	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R747	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R748	1-216-379-11	METAL OXIDE	6.8	5%	2W	F
R749	1-249-389-11	CARBON	4.7	5%	1/4W	F
R750	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1200	1-216-697-91	METAL CHIP	82K	0.50%	1/10W	
R1201	1-208-800-11	METAL CHIP	5.6K	0.50%	1/10W	
R1202	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1203	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R1204	1-216-603-11	METAL CHIP	10	0.50%	1/10W	
R1205	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R1206	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R1207	1-249-401-11	CARBON	47	5%	1/4W	
R1208	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1209	1-249-429-11	CARBON	10K	5%	1/4W	
R1210	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1211	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1212	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1213	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R1214	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1215	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1216	1-202-549-00	SOLID	100	20%	1/2W	
R1217	1-202-731-00	SOLID	10M	20%	1/2W	
R1218	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1219	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1220	1-202-838-00	SOLID	100K	20%	1/2W	
R1221	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1222	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1223	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1224	1-247-702-11	CARBON	150	5%	1/4W	F
R1225	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1226	1-249-401-11	CARBON	47	5%	1/4W	
R1227	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1228	1-249-401-11	CARBON	47	5%	1/4W	
R1229	1-214-951-00	METAL	3.9M	1%	1/2W	
R1230	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1231	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R1232	1-216-025-91	METAL GLAZE	100	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1233	1-214-951-00	METAL	3.9M	1%	1/2W	
R1234	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R1235	1-216-697-91	METAL CHIP	82K	0.50%	1/10W	
R1236	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1237	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R1238	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1239	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R1240	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1241	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R1242	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1243	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1244	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R1245	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R1246	1-208-824-11	METAL CHIP	56K	0.50%	1/10W	
R1247	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1248	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R1249	1-218-768-11	METAL CHIP	470K	0.50%	1/10W	
R1250	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R1251	1-247-863-91	CARBON	22K	5%	1/4W	
R1252	1-249-475-11	CARBON	1.2	5%	1/2W	F
R1253	1-249-476-11	CARBON	1.5	5%	1/2W	F
R1254	1-249-429-11	CARBON	10K	5%	1/4W	F
R1255	1-249-429-11	CARBON	10K	5%	1/4W	F
R1256	1-247-725-11	CARBON	10K	5%	1/4W	F
R1257	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1259	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1260	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1261	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R1262	1-214-951-00	METAL	3.9M	1%	1/2W	
R1263	1-216-097-91	METAL GLAZE	100K	5%	1/10W	

****

*A-1341-924-A EBA BOARD, COMPLETE
****

<CAPACITOR>

C1	1-126-157-11	ELECT	10MF	20%	16V
C2	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C3	1-163-031-11	CERAMIC CHIP	0.01MF		50V

<CONNECTOR>

CN82	*1-774-244-11	CONNECTOR, BOARD TO BOARD 5P

<DIODE>

D1	8-719-911-19	DIODE 1SS119-25

<IC>

IC1	8-759-103-19	IC UPC319C

<RESISTOR>

R1	1-208-822-11	METAL CHIP	47K	0.50%	1/10W
R2	1-208-822-11	METAL CHIP	47K	0.50%	1/10W
R3	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R5	1-216-041-00	METAL GLAZE	470	5%	1/10W
R6	1-216-041-00	METAL GLAZE	470	5%	1/10W
R7	1-216-017-91	METAL GLAZE	47	5%	1/10W

****

*A-1346-398-A EBRG BOARD, COMPLETE
****
(EBA, EBC, EBD BOARD INCLUDING)

4-050-625-11 HOLDER (EB), TR

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C400	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C401	1-126-934-11	ELECT	220MF	20%	16V	
C402	1-124-122-11	ELECT	100MF	20%	50V	
C403	1-126-934-11	ELECT	220MF	20%	16V	
C404	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C405	1-124-122-11	ELECT	100MF	20%	50V	
C406	1-128-563-11	ELECT	100MF	20%	100V	
C407	1-126-964-11	ELECT	10MF	20%	50V	
C408	1-128-563-11	ELECT	100MF	20%	100V	
C409	1-126-964-11	ELECT	10MF	20%	50V	
C410	1-124-122-11	ELECT	100MF	20%	50V	
C411	1-124-122-11	ELECT	100MF	20%	50V	
C412	1-137-418-11	FILM	0.022MF	10%	100V	
C413	1-102-050-00	CERAMIC	0.01MF	99%	500V	
C500	1-128-551-11	ELECT	22MF	20%	63V	
C502	1-102-050-00	CERAMIC	0.01MF	99%	500V	
C503	1-126-933-11	ELECT	100MF	20%	16V	
C504	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C505	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C506	1-102-947-00	CERAMIC	10PF	0.5PF	50V	
C507	1-163-025-11	CERAMIC CHIP	0.001MF		50V	
C508	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C509	1-102-050-00	CERAMIC	0.01MF	99%	500V	
C510	1-126-933-11	ELECT	100MF	20%	16V	
C511	1-128-551-11	ELECT	22MF	20%	63V	
C513	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C514	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C515	1-126-967-11	ELECT	47MF	20%	50V	
C516	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C517	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C518	1-136-169-00	FILM	0.22MF	5%	50V	
C519	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C520	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C521	1-126-967-11	ELECT	47MF	20%	50V	
C522	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C600	1-128-551-11	ELECT	22MF	20%	63V	
C602	1-102-050-00	CERAMIC	0.01MF	99%	500V	
C603	1-126-933-11	ELECT	100MF	20%	16V	
C604	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C605	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C606	1-102-947-00	CERAMIC	10PF	0.5PF	50V	
C607	1-163-025-11	CERAMIC CHIP	0.001MF		50V	
C608	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C609	1-102-050-00	CERAMIC	0.01MF	99%	500V	
C610	1-126-933-11	ELECT	100MF	20%	16V	
C612	1-128-551-11	ELECT	22MF	20%	63V	
C613	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C614	1-126-967-11	ELECT	47MF	20%	50V	
C615	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C616	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C617	1-163-989-11	CERAMIC CHIP	0.033MF	10%	25V	
C618	1-136-169-00	FILM	0.22MF	5%	50V	
C619	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C620	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C621	1-163-031-11	CERAMIC CHIP	0.01MF		50V	

EBRG

REF.NO.	PART NO.	DESCRIPTION			REMARK
C622	1-126-967-11	ELECT	47MF	20%	50V
C1000	1-102-038-00	CERAMIC	0.001MF		500V
C1001	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1002	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1003	1-102-038-00	CERAMIC	0.001MF		500V
C1004	1-126-964-11	ELECT	10MF	20%	50V
C1005	1-126-933-11	ELECT	100MF	20%	16V
C1006	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1007	1-126-933-11	ELECT	100MF	20%	16V
C1008	1-107-652-11	ELECT	10MF	20%	200V
C1009	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1010	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1011	1-128-551-11	ELECT	22MF	20%	50V
C1018	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1019	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1020	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1023	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C1024	1-164-182-11	CERAMIC CHIP	0.0033MF	10%	50V
C1026	1-164-222-11	CERAMIC CHIP	0.22MF		25V
C1031	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1032	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1033	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1034	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1035	1-126-157-11	ELECT	10MF	20%	16V
C1036	1-126-935-11	ELECT	470MF	20%	16V
C1037	1-102-038-00	CERAMIC	0.001MF		500V
C1038	1-126-964-11	ELECT	10MF	20%	50V
C1039	1-102-038-00	CERAMIC	0.001MF		500V
C1040	1-126-964-11	ELECT	10MF	20%	50V
C1041	1-137-217-11	FILM	0.01MF	5%	0
C1042	1-107-660-11	ELECT	4.7MF	20%	350V
C1043	1-101-003-00	CERAMIC	0.0047MF		50V
C1044	1-126-964-11	ELECT	10MF	20%	50V
C1045	1-126-933-11	ELECT	100MF	20%	16V
C1046	1-101-002-00	CERAMIC	0.0022MF		50V
C1047	1-126-971-11	ELECT	470MF	20%	50V
C1048	1-102-038-00	CERAMIC	0.001MF		500V
C1049	1-128-551-11	ELECT	22MF	20%	50V
C1050	1-126-933-11	ELECT	100MF	20%	16V
C1051	1-126-933-11	ELECT	100MF	20%	16V
C1052	1-137-217-11	FILM	0.01MF	5%	0
C1053	1-126-964-11	ELECT	10MF	20%	50V
C1054	1-126-933-11	ELECT	100MF	20%	16V
C1055	1-163-025-11	CERAMIC CHIP	0.001MF		50V
C1056	1-128-551-11	ELECT	22MF	20%	50V
C1057	1-163-034-00	CERAMIC CHIP	0.033MF		50V
C1058	1-163-034-00	CERAMIC CHIP	0.033MF		50V
C1059	1-135-259-11	TANTAL. CHIP	10MF	20%	6.3V
C1060	1-135-259-11	TANTAL. CHIP	10MF	20%	6.3V
C1061	1-135-259-11	TANTAL. CHIP	10MF	20%	6.3V
C1062	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1063	1-164-346-11	CERAMIC CHIP	1MF		16V
C1064	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1065	1-126-966-11	ELECT	33MF	20%	50V
C1066	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1067	1-126-933-11	ELECT	100MF	20%	16V
C1068	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1069	1-126-967-11	ELECT	47MF	20%	50V

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN400	*1-564-511-11	PLUG, CONNECTOR 8P	
CN401	1-564-524-11	PLUG, CONNECTOR 9P	
CN402	*1-774-249-11	CONNECTOR, BOARD TO BOARD 10P	
CN403	*1-564-510-11	PLUG, CONNECTOR 7P	
CN404	*1-774-247-11	CONNECTOR, BOARD TO BOARD 5P	
CN405	*1-774-247-11	CONNECTOR, BOARD TO BOARD 5P	
CN406	1-564-510-11	PLUG, CONNECTOR 7P	
CN407	*1-564-506-11	PLUG, CONNECTOR 3P	
CN408	1-564-506-11	PLUG, CONNECTOR 3P	
CN500	*1-564-527-11	PLUG, CONNECTOR 12P	
CN501	*1-564-515-11	PLUG, CONNECTOR 12P	
CN502	1-774-114-11	CONNECTOR, FPC (DIP TYPE) 24P	
CN503	*1-564-515-11	PLUG, CONNECTOR 12P	
CN504	1-774-114-11	CONNECTOR, FPC (DIP TYPE) 24P	
CN505	*1-564-528-11	PLUG, CONNECTOR 13P	
CN506	*1-568-979-11	CONNECTOR 30P	
CN507	*1-564-527-11	PLUG, CONNECTOR 12P	
CN508	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
CN509	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	
CN511	*1-506-108-41	PIN, CONNECTOR (TERMINAL PIN)	
CN520	*1-774-249-11	CONNECTOR, BOARD TO BOARD 10P	
CN522	*1-564-506-11	PLUG, CONNECTOR 3P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D400	8-719-911-19	DIODE 1SS119-25	
D401	8-719-911-19	DIODE 1SS119-25	
D402	8-719-105-82	DIODE RD5.1M-B2	
D403	8-719-988-31	DIODE D10SC6MR	
D404	8-719-510-41	DIODE D10SC9M	
D405	8-719-900-95	DIODE V09G	
D406	8-719-900-95	DIODE V09G	
D500	8-719-900-95	DIODE V09G	
D501	8-719-911-19	DIODE 1SS119-25	
D600	8-719-900-95	DIODE V09G	
D601	8-719-911-19	DIODE 1SS119-25	
D1000	8-719-900-95	DIODE V09G	
D1001	8-719-105-32	DIODE RD2.7M-B2	
D1004	8-719-801-78	DIODE 1SS184	
D1005	8-719-801-78	DIODE 1SS184	
D1006	8-719-801-78	DIODE 1SS184	
D1007	8-719-105-82	DIODE RD5.1M-B2	
D1008	8-719-901-83	DIODE 1SS83	
D1009	8-719-900-95	DIODE V09G	
D1010	8-719-901-19	DIODE V11N	
D1011	8-719-901-83	DIODE 1SS83	
D1012	8-719-901-83	DIODE 1SS83	
D1013	8-719-900-95	DIODE V09G	
D1014	8-719-900-95	DIODE V09G	
D1015	8-719-801-78	DIODE 1SS184	
D1016	8-719-901-19	DIODE V11N	
D1017	8-719-801-78	DIODE 1SS184	
D1018	8-719-105-82	DIODE RD5.1M-B2	
D1019	8-719-801-78	DIODE 1SS184	
D1020	8-719-106-17	DIODE RD6.8M-B2	
D1021	8-719-106-89	DIODE RD15M-B2	
D1022	8-719-106-89	DIODE RD15M-B2	
D1023	8-719-105-82	DIODE RD5.1M-B2	
D1024	8-719-900-95	DIODE V09G	
D1025	8-719-801-78	DIODE 1SS184	
D1026	8-719-801-78	DIODE 1SS184	
D1027	8-719-801-78	DIODE 1SS184	
D1028	8-719-105-82	DIODE RD5.1M-B2	

<IC>

EBRG

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC400	8-759-700-69	IC NJM79L12A	
IC401	8-759-231-58	IC TA7812S	
IC500	8-759-114-06	IC UPC814G2-1	
IC501	8-759-100-96	IC UPC4558G2	
IC502	8-759-336-63	IC LM675T	
IC600	8-759-114-06	IC UPC814G2-1	
IC601	8-759-100-96	IC UPC4558G2	
IC602	8-759-336-63	IC LM675T	
IC1000	8-759-231-58	IC NJM7812FA	
IC1002	8-759-008-45	IC MC74HC4538AF	
IC1003	8-759-984-55	IC MB675429	
IC1004	8-759-032-53	IC MC74HC244AF	
IC1005	8-759-008-82	IC MC14013BF	
IC1006	8-759-009-19	IC MC14081BF	
IC1007	8-759-032-01	IC MC74HC00AF	
IC1008	8-759-701-88	IC NJM7912FA	
IC1009	8-759-708-05	IC NJM78L05A	
IC1010	8-759-708-12	IC NJM78L12A	
IC1011	8-759-100-93	IC UPC393G2	
IC1012	8-759-701-59	IC NJM7809FA	
IC1013	8-759-516-64	IC S-80742AL	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L400	1-459-155-00	COIL (WITH CORE) 45UH	
L401	1-459-155-00	COIL (WITH CORE) 45UH	
L402	1-410-645-31	INDUCTOR 100UH	
L403	1-459-155-00	COIL (WITH CORE) 45UH	
L404	1-410-645-31	INDUCTOR 100UH	
L405	1-459-155-00	COIL (WITH CORE) 45UH	
L406	1-459-155-00	COIL (WITH CORE) 45UH	
L407	1-459-155-00	COIL (WITH CORE) 45UH	
L1000	1-408-879-21	INDUCTOR 0.47UH	
L1001	1-408-879-21	INDUCTOR 0.47UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q400	8-729-142-69	TRANSISTOR 2SK817	
Q401	8-729-901-01	TRANSISTOR DTC144EK	
Q402	8-729-901-01	TRANSISTOR DTC144EK	
Q403	8-729-142-68	TRANSISTOR 2SJ143	
Q404	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q500	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q501	8-729-142-74	TRANSISTOR 2SD1977	
Q502	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q503	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q504	8-729-142-70	TRANSISTOR 2SB1315	
Q505	8-729-207-82	TRANSISTOR 2SC3421-Y	
Q600	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q601	8-729-142-74	TRANSISTOR 2SD1977	
Q602	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q603	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q604	8-729-142-70	TRANSISTOR 2SB1315	
Q605	8-729-207-82	TRANSISTOR 2SC3421-Y	
Q1000	8-729-901-01	TRANSISTOR DTC144EK	
Q1001	8-729-901-01	TRANSISTOR DTC144EK	
Q1002	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1015	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1016	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1017	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1018	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1019	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1020	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1021	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1022	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1023	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1024	8-729-801-88	TRANSISTOR 2SA1381-E	
Q1025	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1026	8-729-801-99	TRANSISTOR 2SC3503-F	
Q1027	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1028	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1029	8-729-801-99	TRANSISTOR 2SC3503-F	
Q1030	8-729-031-68	TRANSISTOR 2SC4630LS	
Q1031	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1032	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1033	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1034	8-729-031-68	TRANSISTOR 2SC4630LS	
Q1035	8-729-901-01	TRANSISTOR DTC144EK	
Q1036	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1037	8-729-901-01	TRANSISTOR DTC144EK	
Q1038	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1039	8-729-901-01	TRANSISTOR DTC144EK	
Q1040	8-729-901-01	TRANSISTOR DTC144EK	
Q1041	8-729-031-68	TRANSISTOR 2SC4630LS	
Q1042	8-729-031-68	TRANSISTOR 2SC4630LS	
Q1043	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1044	8-729-801-99	TRANSISTOR 2SC3503-F	
Q1045	8-729-801-88	TRANSISTOR 2SA1381-E	
Q1046	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1047	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1048	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1049	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1050	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1051	8-729-230-49	TRANSISTOR 2SC2712-YG	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R401	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R402	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R404	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R405	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R406	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R407	1-216-005-00	METAL GLAZE	15	5%	1/10W	
R408	1-216-005-00	METAL GLAZE	15	5%	1/10W	
R409	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R410	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R500	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R501	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R502	1-216-623-11	METAL CHIP	68	0.50%	1/10W	
R503	1-249-393-11	CARBON	10	5%	1/4W	F
R504	1-216-647-11	METAL CHIP	680	0.50%	1/10W	
R505	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R506	1-215-873-00	METAL OXIDE	4.7K	5%	1W	F
R507	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R508	1-247-764-11	CARBON	10K	5%	1/2W	
R509	1-247-688-11	CARBON	10	5%	1/4W	F
R510	1-249-377-11	CARBON	0.47	5%	1/4W	F
R511	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R512	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R513	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R514	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R515	1-249-377-11	CARBON	0.47	5%	1/4W	F
R516	1-247-688-11	CARBON	10	5%	1/4W	F
R517	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R518	1-215-915-11	METAL OXIDE	470	5%	3W	F
R519	1-215-915-11	METAL OXIDE	470	5%	3W	F
R520	1-215-917-11	METAL OXIDE	1K	5%	3W	F

REF.NO.	PART NO.	DESCRIPTION				REMARK
R521	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W	
R522	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R523	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R524	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R525	1-216-633-11	METAL CHIP	180	0.50%	1/10W	
R526	1-216-369-00	METAL OXIDE	1	5%	2W	F
R527	1-249-393-11	CARBON	10	5%	1/4W	F
R530	1-216-295-91	CONDUCTOR, CHIP				
R532	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R534	1-216-295-91	CONDUCTOR, CHIP				
R535	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R536	1-249-389-11	CARBON	4.7	5%	1/4W	F
R537	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R538	1-208-800-11	METAL CHIP	5.6K	0.50%	1/10W	
R539	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R540	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R541	1-249-380-11	CARBON	0.82	5%	1/4W	F
R542	1-249-389-11	CARBON	4.7	5%	1/4W	
R543	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R544	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R545	1-215-923-00	METAL OXIDE	10K	5%	3W	F
R546	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R548	1-249-389-11	CARBON	4.7	5%	1/4W	F
R549	1-216-379-11	METAL OXIDE	6.8	5%	2W	F
R600	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R601	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R602	1-216-623-11	METAL CHIP	68	0.50%	1/10W	
R603	1-249-393-11	CARBON	10	5%	1/4W	F
R604	1-216-647-11	METAL CHIP	680	0.50%	1/10W	
R605	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R606	1-215-873-00	METAL OXIDE	4.7K	5%	1W	F
R607	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R608	1-247-764-11	CARBON	10K	5%	1/2W	
R609	1-247-688-11	CARBON	10	5%	1/4W	F
R610	1-249-377-11	CARBON	0.47	5%	1/4W	F
R611	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R612	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R613	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R614	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R615	1-249-377-11	CARBON	0.47	5%	1/4W	F
R616	1-247-688-11	CARBON	10	5%	1/4W	F
R617	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R618	1-215-915-11	METAL OXIDE	470	5%	3W	F
R619	1-215-915-11	METAL OXIDE	470	5%	3W	F
R620	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W	
R621	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R622	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R623	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R624	1-216-633-11	METAL CHIP	180	0.50%	1/10W	
R625	1-215-917-11	METAL OXIDE	1K	5%	3W	F
R626	1-216-369-00	METAL OXIDE	1	5%	2W	F
R627	1-249-393-11	CARBON	10	5%	1/4W	F
R630	1-216-295-91	CONDUCTOR, CHIP				
R633	1-216-295-91	CONDUCTOR, CHIP				
R634	1-249-389-11	CARBON	4.7	5%	1/4W	F
R635	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R636	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R637	1-208-800-11	METAL CHIP	5.6K	0.50%	1/10W	
R638	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R639	1-249-389-11	CARBON	4.7	5%	1/4W	
R640	1-249-380-11	CARBON	0.82	5%	1/4W	F
R641	1-215-923-00	METAL OXIDE	10K	5%	3W	F
R642	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R643	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R645	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R646	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R647	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R648	1-216-379-11	METAL OXIDE	6.8	5%	2W	F
R649	1-249-389-11	CARBON	4.7	5%	1/4W	F
R1000	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1001	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1002	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1003	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1004	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1005	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1006	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1007	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1008	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1009	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1010	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1011	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1012	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1013	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1014	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1015	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1016	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1017	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1018	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1019	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1020	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1021	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1022	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1023	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1024	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1025	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1026	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1027	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1028	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1029	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1030	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1031	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1032	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1033	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1034	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R1035	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1036	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1037	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R1038	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1047	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1052	1-216-647-11	METAL CHIP	680	0.50%	1/10W	
R1054	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R1055	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1059	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1061	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1071	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R1072	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R1073	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R1074	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1075	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1076	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1077	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1078	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1079	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R1080	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1081	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R1082	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1083	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	

EBRG **EBC**

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1084	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R1085	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1086	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1087	1-249-401-11	CARBON	47	5%	1/4W	
R1088	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1089	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1090	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1091	1-249-429-11	CARBON	10K	5%	1/4W	
R1092	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1093	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1094	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R1095	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1096	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1097	1-202-549-00	SOLID	100	20%	1/2W	
R1098	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1099	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1100	1-202-731-00	SOLID	10M	20%	1/2W	
R1101	1-202-838-00	SOLID	100K	20%	1/2W	
R1102	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1103	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1104	1-208-824-11	METAL CHIP	56K	0.50%	1/10W	
R1105	1-247-702-11	CARBON	150	5%	1/4W	F
R1106	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R1107	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1108	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1109	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1110	1-249-441-11	CARBON	100K	5%	1/4W	
R1111	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1112	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R1113	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1114	1-202-549-00	SOLID	100	20%	1/2W	
R1115	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1116	1-202-731-00	SOLID	10M	20%	1/2W	
R1117	1-249-432-11	CARBON	18K	5%	1/4W	
R1118	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1119	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1120	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1121	1-214-951-00	METAL	3.9M	1%	1/2W	
R1122	1-202-838-00	SOLID	100K	20%	1/2W	
R1123	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1124	1-216-047-91	METAL GLAZE	820	5%	1/10W	
R1125	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1126	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1127	1-214-951-00	METAL	3.9M	1%	1/2W	
R1128	1-214-951-00	METAL	3.9M	1%	1/2W	
R1129	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1130	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R1131	1-214-951-00	METAL	3.9M	1%	1/2W	
R1132	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1133	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1134	1-215-467-00	METAL	82K	1%	1/4W	
R1135	1-215-467-00	METAL	82K	1%	1/4W	
R1136	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1137	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1138	1-249-401-11	CARBON	47	5%	1/4W	
R1139	1-249-401-11	CARBON	47	5%	1/4W	
R1140	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1141	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1142	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R1143	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R1144	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R1145	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1146	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	
R1147	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R1148	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R1149	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R1150	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1151	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R1152	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R1153	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1154	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1155	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R1156	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1157	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1158	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1159	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1160	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R1161	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1163	1-214-951-00	METAL	3.9M	1%	1/2W	
R1164	1-214-951-00	METAL	3.9M	1%	1/2W	
R1165	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R1166	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R1168	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1169	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1170	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	

****

*A-1341-925-A EBC BOARD, COMPLETE
****

<CAPACITOR>

C101	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C102	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C103	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C104	1-163-833-00	CERAMIC CHIP	0.068MF		25V
C105	1-108-702-11	MYLAR	0.068MF	10%	100V

<CONNECTOR>

CN83	*1-774-246-11	CONNECTOR, BOARD TO BOARD 10P

<TRANSISTOR>

Q101	8-729-119-78	TRANSISTOR 2SC2785-HFE
	4-382-854-11	SCREW (M3X10), P, SW (+)
Q102	8-729-300-13	TRANSISTOR 2SC2471
Q103	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q105	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q106	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q107	8-729-119-78	TRANSISTOR 2SC2785-HFE

<RESISTOR>

R101	1-216-017-91	METAL GLAZE	47	5%	1/10W
R102	1-216-043-91	METAL GLAZE	560	5%	1/10W
R103	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R104	1-216-017-91	METAL GLAZE	47	5%	1/10W
R105	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R106	1-216-047-91	METAL GLAZE	820	5%	1/10W
R107	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R108	1-216-017-91	METAL GLAZE	47	5%	1/10W
R109	1-249-416-11	CARBON	820	5%	1/4W
R110	1-216-001-00	METAL GLAZE	10	5%	1/10W
R111	1-216-001-00	METAL GLAZE	10	5%	1/10W
R112	1-216-001-00	METAL GLAZE	10	5%	1/10W
R113	1-216-001-00	METAL GLAZE	10	5%	1/10W

****

*A-1280-421-A EBD BOARD, COMPLETE
****

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
C201	1-126-157-11	ELECT 10MF 20% 16V	
C202	1-126-964-11	ELECT 10MF 20% 50V	
C203	1-126-964-11	ELECT 10MF 20% 50V	
C204	1-163-038-91	CERAMIC CHIP 0.1MF 25V	
C205	1-163-038-91	CERAMIC CHIP 0.1MF 25V	
C206	1-128-551-11	ELECT 22MF 20% 50V	
C207	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C208	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C209	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C210	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C211	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C212	1-128-551-11	ELECT 22MF 20% 50V	
C213	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN521	*1-774-246-11	CONNECTOR, BOARD TO BOARD 10P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D201	8-719-801-78	DIODE 1SS184	
D202	8-719-801-78	DIODE 1SS184	
D203	8-719-106-23	DIODE RD7.5M-B2	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC201	8-759-710-78	IC NJM082BM	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q201	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q202	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q203	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q204	8-729-216-22	TRANSISTOR 2SA1162-G	
Q205	8-729-216-22	TRANSISTOR 2SA1162-G	
Q206	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q207	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q208	8-729-216-22	TRANSISTOR 2SA1162-G	
Q209	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q210	8-729-216-22	TRANSISTOR 2SA1162-G	
Q211	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q212	8-729-230-49	TRANSISTOR 2SC2712-YG	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
R201	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R202	1-216-105-91	METAL GLAZE 220K 5% 1/10W	
R203	1-208-803-11	METAL CHIP 7.5K 0.50% 1/10W	
R204	1-216-673-11	METAL CHIP 8.2K 0.50% 1/10W	
R205	1-208-800-11	METAL CHIP 5.6K 0.50% 1/10W	
R206	1-216-687-11	METAL CHIP 33K 0.50% 1/10W	
R207	1-208-814-11	METAL CHIP 22K 0.50% 1/10W	
R208	1-216-627-11	METAL CHIP 100 0.50% 1/10W	
R209	1-216-017-91	METAL GLAZE 47 5% 1/10W	
R210	1-216-661-11	METAL CHIP 2.7K 0.50% 1/10W	
R211	1-216-663-11	METAL CHIP 3.3K 0.50% 1/10W	
R212	1-216-699-11	METAL CHIP 100K 0.50% 1/10W	
R213	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R214	1-216-097-91	METAL GLAZE 100K 5% 1/10W	
R215	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R216	1-216-105-91	METAL GLAZE 220K 5% 1/10W	
R217	1-216-063-91	METAL GLAZE 3.9K 5% 1/10W	
R218	1-216-673-11	METAL CHIP 8.2K 0.50% 1/10W	
R219	1-216-105-91	METAL GLAZE 220K 5% 1/10W	
R220	1-216-095-00	METAL GLAZE 82K 5% 1/10W	
R221	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
R222	1-216-673-11	METAL CHIP 8.2K 0.50% 1/10W	
R223	1-216-673-11	METAL CHIP 8.2K 0.50% 1/10W	
R224	1-216-105-91	METAL GLAZE 220K 5% 1/10W	
R225	1-216-063-91	METAL GLAZE 3.9K 5% 1/10W	
R226	1-216-665-11	METAL CHIP 3.9K 0.50% 1/10W	
R227	1-216-017-91	METAL GLAZE 47 5% 1/10W	
R228	1-216-017-91	METAL GLAZE 47 5% 1/10W	

****

*A-1390-522-A NA BOARD, COMPLETE
****

*4-398-771-01 CAP, LED

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
C601	1-126-967-11	ELECT 47MF 20% 16V	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN50	*1-564-519-11	PLUG, CONNECTOR 4P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D601	8-719-955-04	DIODE PY5504S-1	
D602	8-719-920-66	DIODE SLR-54VC12	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC601	8-741-810-90	ELEMENT,RAY-CATCHER SBX1810-09	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q601	8-729-119-78	TRANSISTOR 2SC2785-HFE	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
R601	1-247-807-31	CARBON 100 5% 1/4W	
R602	1-247-815-91	CARBON 220 5% 1/4W	
R603	1-247-807-31	CARBON 100 5% 1/4W	
R604	1-247-863-91	CARBON 22K 5% 1/4W	
R605	1-249-429-11	CARBON 10K 5% 1/4W	

****

*A-1390-255-A L BOARD, COMPLETE
****

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
C114	1-101-004-00	CERAMIC 0.01MF 50V	
C115	1-101-004-00	CERAMIC 0.01MF 50V	
C116	1-101-004-00	CERAMIC 0.01MF 50V	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN86	*1-564-516-11	PLUG, CONNECTOR 13P	
CN87	1-564-517-11	PLUG, CONNECTOR 2P	

<COMPOSITION CIRCUIT BLOCK>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CP101	1-236-776-11	NETWORK, RES	
CP102	1-236-776-11	NETWORK, RES	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D101	8-719-987-73	DIODE GL3HD43	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC106	8-759-233-33	IC TC74HC541AP	
IC107	8-759-044-95	IC MC14495P1	
IC108	8-759-044-95	IC MC14495P1	
IC109	8-719-962-02	DIODE GL-6P202	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L102	1-410-671-31	INDUCTOR 47UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q101	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q102	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q103	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q104	8-729-119-78	TRANSISTOR 2SC2785-HFE	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
R127	1-249-441-11	CARBON 100K 5% 1/4W	
R128	1-249-441-11	CARBON 100K 5% 1/4W	
R129	1-247-807-31	CARBON 100 5% 1/4W	
R130	1-249-429-11	CARBON 10K 5% 1/4W	
R131	1-249-417-11	CARBON 1K 5% 1/4W	

<SWITCH>

REF.NO.	PART NO.	DESCRIPTION	REMARK
SW1	1-571-588-11	SWITCH, SLIDE	

****

*A-1390-256-A NB BOARD, COMPLETE
****

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
C701	1-126-967-11	ELECT 47MF 20% 16V	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN51	*1-564-507-11	PLUG, CONNECTOR 4P	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC701	8-741-139-80	IC BX-1398	

****

*A-1394-663-A Y BOARD, COMPLETE (VPH-1292Q/QM)
****

*A-1394-693-A Y BOARD, COMPLETE (VPH-1292QMG)

****

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*1-526-654-21	SOCKET, IC (DP) 16P	
	*1-526-659-00	SOCKET, IC (DP) 28P	
	*1-526-950-11	SOCKET, IC 64P	
	*1-563-949-11	SOCKET, SIL 8P	

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
C2	1-124-927-11	ELECT 4.7MF 20% 50V	
C3	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C4	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C5	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C6	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C7	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C8	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C9	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C10	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C11	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C12	1-163-239-11	CERAMIC CHIP 33PF 5% 50V	
C13	1-163-239-11	CERAMIC CHIP 33PF 5% 50V	
C14	1-163-036-00	CERAMIC CHIP 0.068MF 50V	
C15	1-163-036-00	CERAMIC CHIP 0.068MF 50V	
C16	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C17	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C18	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C19	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C20	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C21	1-163-097-00	CERAMIC CHIP 15PF 5% 50V	
C22	1-163-099-00	CERAMIC CHIP 18PF 5% 50V	
C23	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C24	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C25	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C26	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C27	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C28	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C29	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C30	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C31	1-163-239-11	CERAMIC CHIP 33PF 5% 50V	
C32	1-163-239-11	CERAMIC CHIP 33PF 5% 50V	
C33	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C34	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C35	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C36	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C37	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C38	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C39	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C40	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C41	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C42	1-124-927-11	ELECT 4.7MF 20% 63V	
C43	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C45	1-163-087-00	CERAMIC CHIP 4PF 0.25PF 50V	
C46	1-163-222-11	CERAMIC CHIP 5PF 0.25PF 50V	
C47	1-126-940-11	ELECT 330MF 20% 16V	
C48	1-124-927-11	ELECT 4.7MF 20% 63V	
C49	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C50	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C51	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C52	1-126-935-11	ELECT 470MF 20% 16V	
C53	1-124-927-11	ELECT 4.7MF 20% 63V	
C54	1-126-933-11	ELECT 100MF 20% 16V	
C55	1-126-933-11	ELECT 100MF 20% 16V	
C56	1-126-933-11	ELECT 100MF 20% 16V	
C57	1-163-227-11	CERAMIC CHIP 10PF 0.5PF 50V	

REF.NO.	PART NO.	DESCRIPTION	REMARK
C58	1-163-227-11	CERAMIC CHIP 10PF 0.5PF 50V	
C59	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C60	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C61	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C62	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C63	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C64	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C65	1-163-036-00	CERAMIC CHIP 0.068MF 50V	
C67	1-126-940-11	ELECT 330MF 20% 16V	
C68	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C69	1-163-121-00	CERAMIC CHIP 150PF 5% 50V	
C70	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C71	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C72	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C73	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C74	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C75	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C76	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C77	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C78	1-126-964-11	ELECT 10MF 20% 50V	
C79	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C81	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C82	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C83	1-126-964-11	ELECT 10MF 20% 50V	
C84	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C85	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C86	1-163-133-00	CERAMIC CHIP 470PF 5% 50V	
C87	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C88	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C90	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C91	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C92	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C93	1-163-091-00	CERAMIC CHIP 8PF 0.25PF 50V	
C94	1-163-237-11	CERAMIC CHIP 27PF 5% 50V	
C95	1-124-927-11	ELECT 4.7MF 20% 63V	
C97	1-126-940-11	ELECT 330MF 20% 16V	
C98	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C99	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C100	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C101	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C102	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C103	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C104	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C105	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C106	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C107	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C109	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN52	*1-568-984-11	CONNECTOR, MALE 96P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D2	8-719-971-20	DIODE ERC38-06	
D4	8-719-820-12	DIODE TLR224	
D5	8-719-104-34	DIODE 1S2836	
D7	8-719-801-78	DIODE 1SS184	
D8	8-719-801-78	DIODE 1SS184	
D9	8-719-104-34	DIODE 1S2836	
D10	8-719-104-34	DIODE 1S2836	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC1	8-759-320-49	IC HD64180R1P8	
IC2	8-759-324-46	IC NM27C512Q-90	
IC3	8-752-356-60	IC CXK5864CM-10LL	
IC4	8-759-196-XX	IC. UPD28C64ACZ-15	
IC5	8-759-925-80	IC SN74HC14ANS	
IC6	8-759-239-55	IC TC74HC123AF	
IC7	8-759-008-21	IC MC74HC541F	
IC8	8-759-008-21	IC MC74HC541F	
IC9	8-759-995-97	IC MB8855-1314N	
IC10	8-759-984-56	IC MB670840PF	
IC11	8-759-984-59	IC MB654842UPF	
IC12	8-759-984-58	IC MB671469PF	
IC13	8-759-258-20	IC MBCG24123-4188	
IC14	8-752-350-68	IC CXK5863BM-35	
IC15	8-752-333-84	IC CXK3864-040M	
IC16	8-752-333-85	IC CXK3864-041M	
IC17	8-752-333-86	IC CXK3864-042M	
IC18	8-759-301-24	IC HD10124	
IC19	8-759-301-24	IC HD10124	
IC20	8-752-306-51	IC CX23065A	
IC21	8-759-911-24	IC SN74S124N	
IC22	8-759-100-93	IC UPC393G2	
IC23	8-759-081-42	IC TC74VHC00F	
IC24	8-759-061-67	IC MC34051M	
IC25	8-759-114-06	IC UPC814G2-1	
IC26	8-759-232-50	IC TC74HC132AF-TP2	
IC27	8-759-240-41	IC TC74HC107AP	
IC28	8-759-032-01	IC MC74HC00AF	
IC29	8-759-239-55	IC TC74HC123AF	
IC30	8-759-032-29	IC MC74HC126AF	
IC31	8-759-925-80	IC SN74HC14ANS	
IC32	8-759-008-21	IC MC74HC541F	
IC33	8-759-979-65	IC RH5VA43AA	
IC34	8-759-032-41	IC MC74HC157AF	
IC35	8-759-144-82	IC UPC2405HF	
IC36	8-759-911-24	IC SN74S124N	
IC37	8-759-232-58	IC TC74HC139AF-TP2	
IC38	8-759-081-48	IC TC74VHC08F	
IC39	8-759-342-06	IC PALCE16V8H-15VPH1-T4	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L1	1-459-155-00	COIL (WITH CORE) 45UH	
L2	1-459-155-00	COIL (WITH CORE) 45UH	
L3	1-459-155-00	COIL (WITH CORE) 45UH	
L4	1-459-155-00	COIL (WITH CORE) 45UH	

<IC LINK>

REF.NO.	PART NO.	DESCRIPTION	REMARK
PS1	1-532-679-00	LINK, IC	
PS2	1-532-679-00	LINK, IC	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q3	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4	8-729-216-22	TRANSISTOR 2SA1162-G	
Q5	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q6	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q7	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q8	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q9	8-729-216-22	TRANSISTOR 2SA1162-G	
Q10	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q11	8-729-230-49	TRANSISTOR 2SC2712-YG	

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<RESISTOR>				
R1	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R2	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R3	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R4	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R5	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R6	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R7	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R8	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R9	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R10	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R11	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R12	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R13	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R14	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R15	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R16	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R17	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R18	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R19	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R20	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R21	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R22	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R23	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R24	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R25	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R26	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R27	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R28	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R29	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R30	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R31	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R32	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R33	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R34	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R36	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R37	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R38	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R39	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R40	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R41	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R42	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R43	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R44	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R45	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R46	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R47	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R48	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R49	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R50	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R51	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R52	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R53	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R54	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R55	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R56	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R57	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R58	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R59	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R62	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R63	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R64	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R65	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R67	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R68	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R69	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R70	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R71	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R72	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R73	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R74	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R75	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R76	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R77	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R78	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R79	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R80	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R81	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R82	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R83	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R84	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R85	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R86	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R87	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R88	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R89	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R90	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R91	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R92	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R93	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R102	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R103	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R104	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R105	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R106	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R107	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R108	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R109	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R110	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R111	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R112	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R113	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R114	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R115	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R116	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R117	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R118	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R119	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R120	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R121	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R122	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R123	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R124	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R125	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R126	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R127	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R128	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R129	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R130	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R131	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R132	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R133	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R134	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R135	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R136	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R137	1-216-025-91	METAL GLAZE	100	5%	1/10W	

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R138	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R139	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R140	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R141	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R142	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R143	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R146	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R147	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R148	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R149	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R150	1-216-105-91	METAL GLAZE	220K	5%	1/10W	
R151	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R152	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R153	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R154	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R155	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R156	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R157	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R158	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R159	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R160	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R162	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R163	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R164	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R165	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R166	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R167	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R168	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R169	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R170	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R171	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R172	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R173	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R174	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R175	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R176	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R177	1-216-129-00	METAL GLAZE	2.2M	5%	1/10W	
R178	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R179	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R181	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R182	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R183	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R184	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R189	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R190	1-216-295-91	CONDUCTOR, CHIP				
R191	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R192	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R193	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R194	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R195	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R199	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R200	1-216-295-91	CONDUCTOR, CHIP				
R202	1-216-295-91	CONDUCTOR, CHIP				
R204	1-216-037-00	METAL GLAZE	330	5%	1/10W	

<SWITCH>

SW1	1-570-598-11	SWITCH, DIP
SW2	1-570-204-21	SWITCH, KEY BOARD

<CRYSTAL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
X1	1-578-687-11	VIBRATOR, CRYSTAL	
X2	1-577-116-21	VIBRATOR, CRYSTAL	
X3	1-567-192-11	OSCILLATOR, CERAMIC	
X4	1-577-353-11	VIBRATOR, CERAMIC	

****

⚠ 9-936-102-01 U1 BOARD, COMPLETE
****

<CAPACITOR>

C2	⚠ 9-936-107-01	FILM	1MF	250V
C3	⚠ 9-936-108-01	FILM	0.0047MF	400V
C4	⚠ 9-936-108-01	FILM	0.0047MF	400V
C5	⚠ 9-936-107-01	FILM	1MF	250V
C6	⚠ 9-936-108-01	FILM	0.0047MF	400V
C7	⚠ 9-936-107-01	FILM	1MF	250V
C8	⚠ 9-936-108-01	FILM	0.0047MF	400V
C9	⚠ 9-936-107-01	FILM	1MF	250V

<COIL>

L1	⚠ 9-936-109-01	COIL		
L2	⚠ 9-936-109-01	COIL		
L3	⚠ 9-936-110-01	COIL	50MH	15A
L4	⚠ 9-936-110-01	COIL	50MH	15A

<RESISTOR>

R1	⚠ 9-936-106-01	220K	1W

****

⚠ 9-936-103-01 U2 BOARD, COMPLETE
****

<CAPACITOR>

C10	⚠ 9-936-116-01	FILM	0.47MF		250V
C11	⚠ 1-126-143-11	ELECT	470MF	20%	35V
C12	⚠ 1-137-190-81	FILM	0.22MF	5%	50V
C13	⚠ 9-936-117-01	FILM	0.68MF		630V
C14	⚠ 1-130-471-91	FILM	0.001MF	5%	50V
C15	⚠ 1-130-471-91	FILM	0.001MF	5%	50V
C17	⚠ 1-130-479-91	FILM	0.0047MF	5%	50V
C18	⚠ 1-130-467-91	FILM	470PF	5%	50V
C19	⚠ 1-130-471-91	FILM	0.001MF	5%	50V
C20	⚠ 1-130-471-91	FILM	0.001MF	5%	50V
C21	⚠ 1-137-190-81	FILM	0.22MF	5%	50V
C22	⚠ 9-936-118-01	CERAMIC	100PF		50V
C23	⚠ 1-136-497-81	FILM	0.1MF	5%	50V
C24	⚠ 1-130-471-91	FILM	0.001MF	5%	50V
C25	⚠ 1-130-471-91	FILM	0.001MF	5%	50V
C26	⚠ 1-130-479-91	FILM	0.0047MF	5%	50V
C27	⚠ 1-137-194-81	FILM	0.47MF	5%	50V
C28	⚠ 1-130-471-91	FILM	0.001MF	5%	50V
C29	⚠ 1-110-600-11	ELECT	120MF	20%	25V
C30	⚠ 1-136-493-81	FILM	0.047MF	5%	50V
C31	⚠ 9-936-119-01	CERAMIC	470PF		2KV
C32	⚠ 1-130-475-91	FILM	0.0022MF	5%	50V
C33	⚠ 1-136-497-81	FILM	0.1MF	5%	50V
C34	⚠ 9-936-120-01	CERAMIC	220PF		2KV
C35	⚠ 9-936-118-01	CERAMIC	100PF		50V
C36	⚠ 1-125-601-11	ELECT	470MF	20%	450V
C37	⚠ 1-125-601-11	ELECT	470MF	20%	450V
C38	⚠ 1-125-601-11	ELECT	470MF	20%	450V
C39	⚠ 1-130-471-91	FILM	0.001MF	5%	50V

U2

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION			REMARK
C40	⚠ 1-130-467-91	FILM	470PF	5%	50V
C41	⚠ 1-125-601-11	ELECT	470MF	20%	450V
C42	⚠ 1-130-471-91	FILM	0.001MF	5%	50V
C43	⚠ 1-109-965-11	FILM	0.22MF	10%	400V
C44	⚠ 1-128-078-11	ELECT	33MF	20%	25V
C45	⚠ 1-130-471-91	FILM	0.001MF	5%	50V
C46	⚠ 1-130-471-91	FILM	0.001MF	5%	50V
C51	⚠ 9-936-121-01	CERAMIC	220PF		400V
C52	⚠ 9-936-121-01	CERAMIC	220PF		400V
C53	⚠ 1-136-497-81	FILM	0.1MF	5%	50V
C100	⚠ 1-136-497-81	FILM	0.1MF	5%	50V
C101	⚠ 1-130-483-91	FILM	0.01MF	5%	50V
C102	⚠ 1-126-613-91	ELECT	10MF	20%	50V
C103	⚠ 1-130-467-91	FILM	470PF	5%	50V
C104	⚠ 1-130-471-91	FILM	0.001MF	5%	50V
C105	⚠ 1-136-203-61	FILM	0.01MF	10%	630V
C106	⚠ 1-126-317-51	ELECT	220PF	20%	50V
C107	⚠ 1-130-479-91	FILM	0.0047MF	5%	50V
C108	⚠ 1-130-475-91	FILM	0.0022MF	5%	50V
C110	⚠ 1-136-497-81	FILM	0.1MF	5%	50V
C200	⚠ 1-126-143-11	ELECT	470MF	20%	35V
C201	⚠ 1-126-143-11	ELECT	470MF	20%	35V
C202	⚠ 1-126-801-91	ELECT	1MF	20%	50V
C204	⚠ 1-136-203-61	FILM	0.01MF	10%	630V

<DIODE>

D10	⚠ 8-719-046-83	DIODE RBV-2506
D12	⚠ 8-719-922-20	DIODE 1SS120TD
D16	⚠ 9-936-124-01	DIODE AL01Z-V0
D17	⚠ 9-936-124-01	DIODE AL01Z-V0
D19	⚠ 9-936-125-01	DIODE FML-G16S
D21	⚠ 8-719-947-85	DIODE ERB44-08
D22	⚠ 9-936-126-01	DIODE FML-36S
D23	⚠ 9-936-126-01	DIODE FML-36S
D24	⚠ 8-719-947-85	DIODE ERB44-08
D101	⚠ 9-936-124-01	DIODE AL01Z-V0
D102	⚠ 8-719-947-85	DIODE ERB44-08
D103	⚠ 9-936-124-01	DIODE AL01Z-V0
D104	⚠ 8-719-922-20	DIODE 1SS120TD
D200	⚠ 9-936-124-01	DIODE AL01Z-V0
D201	⚠ 9-936-124-01	DIODE AL01Z-V0
D202	⚠ 9-936-124-01	DIODE AL01Z-V0
ZD10	⚠ 9-936-127-01	DIODE HZS12A3-TD
ZD100	⚠ 9-936-128-01	DIODE HZS12C2-TD

<IC>

IC10	⚠ 9-936-129-01	IC UC2854
IC11	⚠ 8-759-285-26	IC HA17431P
IC100	⚠ 9-936-130-01	IC HA17384PS
IC101	⚠ 8-759-103-95	IC UPC393C

<COIL>

L10	⚠ 1-404-538-11	INDUCTOR 10A 750UH

<PHOTO COUPLER>

PC1	⚠ 8-749-010-59	PHOTO COUPLER TLP721F
PC2	⚠ 8-749-010-59	PHOTO COUPLER TLP721F

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION
Q10	⚠ 9-936-122-01	TRANSISTOR 2SK1573
Q11	⚠ 8-729-205-88	TRANSISTOR 2SC3074Y
Q12	⚠ 8-729-206-12	TRANSISTOR 2SA1244Y
Q13	⚠ 9-936-122-01	TRANSISTOR 2SK1573
Q14	⚠ 9-936-122-01	TRANSISTOR 2SK1573
Q15	⚠ 9-936-122-01	TRANSISTOR 2SK1573
Q16	⚠ 8-729-230-41	TRANSISTOR 2SA1048Y
Q17	⚠ 8-729-200-24	TRANSISTOR 2SC2458Y
Q18	⚠ 8-729-200-24	TRANSISTOR 2SC2458Y
Q19	⚠ 8-729-230-41	TRANSISTOR 2SA1048Y
Q20	⚠ 8-729-321-59	TRANSISTOR 2SK1170
Q21	⚠ 8-729-200-24	TRANSISTOR 2SC2458Y
Q22	⚠ 8-729-205-95	TRANSISTOR 2SA1428Y
Q23	⚠ 8-729-200-24	TRANSISTOR 2SC2458Y
Q24	⚠ 9-936-122-01	TRANSISTOR 2SK1573
Q25	⚠ 9-936-122-01	TRANSISTOR 2SK1573
Q26	⚠ 8-729-321-59	TRANSISTOR 2SK1170
Q100	⚠ 8-729-230-41	TRANSISTOR 2SA1048Y
Q101	⚠ 9-936-123-01	TRANSISTOR 2SK960
Q102	⚠ 8-729-200-24	TRANSISTOR 2SC2458Y

<RESISTOR>

						REMARK
R10	⚠ 9-936-113-01	CEMENT	0.1	5%	5W	
R11	⚠ 9-936-113-01	CEMENT	0.1	5%	5W	
R12	⚠ 9-936-113-01	CEMENT	0.1	5%	5W	
R13	⚠ 9-936-113-01	CEMENT	0.1	5%	5W	
R14	⚠ 1-247-845-91	CARBON	3.9K	5%	1/4W	
R15	⚠ 1-247-844-91	CARBON	3.6K	5%	1/4W	
R16	⚠ 1-247-845-91	CARBON	3.9K	5%	1/4W	
R17	⚠ 1-247-891-91	CARBON	330K	5%	1/4W	
R18	⚠ 1-247-891-91	CARBON	330K	5%	1/4W	
R19	⚠ 1-247-843-91	CARBON	3.3K	5%	1/4W	
R20	⚠ 1-247-807-91	CARBON	100	5%	1W	
R21	⚠ 1-247-787-91	CARBON	15	5%	1/4W	
R22	⚠ 1-215-863-91	METAL OXIDE	100	5%	1W	F
R23	⚠ 1-247-831-91	CARBON	1K	5%	1/4W	
R24	⚠ 1-247-855-91	CARBON	10K	5%	1/4W	
R25	⚠ 1-247-848-91	CARBON	5.1K	5%	1/4W	
R26	⚠ 1-247-891-91	CARBON	330K	5%	1/4W	
R27	⚠ 1-247-887-91	CARBON	220K	5%	1/4W	
R28	⚠ 1-247-843-91	CARBON	3.3K	5%	1/4W	
R29	⚠ 1-247-807-91	CARBON	100	5%	1W	
R30	⚠ 1-247-787-91	CARBON	15	5%	1/4W	
R31	⚠ 1-247-859-91	CARBON	15K	5%	1/4W	
R32	⚠ 1-247-873-91	CARBON	56K	5%	1/4W	
R33	⚠ 1-247-843-91	CARBON	3.3K	5%	1/4W	
R34	⚠ 1-247-807-91	CARBON	100	5%	1W	
R35	⚠ 1-247-787-91	CARBON	15	5%	1/4W	
R36	⚠ 1-247-883-91	CARBON	150K	5%	1/4W	
R37	⚠ 1-247-891-91	CARBON	330K	5%	1/4W	
R38	⚠ 1-247-847-91	CARBON	4.7K	5%	1/4W	
R39	⚠ 1-247-862-91	CARBON	20K	5%	1/4W	
R40	⚠ 1-247-843-91	CARBON	3.3K	5%	1/4W	
R41	⚠ 1-247-807-91	CARBON	100	5%	1W	
R42	⚠ 1-247-787-91	CARBON	15	5%	1/4W	
R43	⚠ 1-247-883-91	CARBON	150K	5%	1/4W	
R44	⚠ 1-247-879-91	CARBON	100K	5%	1/4W	
R45	⚠ 1-247-879-91	CARBON	100K	5%	1/4W	
R46	⚠ 1-247-881-91	CARBON	100K	5%	1/4W	
R47	⚠ 1-247-855-91	CARBON	10K	5%	1/4W	
R48	⚠ 9-936-114-01	CEMENT	220		5W	
R49	⚠ 1-247-863-91	CARBON	22K	5%	1/4W	
R50	⚠ 1-247-847-91	CARBON	4.7K	5%	1/4W	

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R51	⚠ 1-247-855-91	CARBON	10K	5%	1/4W	
R52	⚠ 1-247-855-91	CARBON	10K	5%	1/4W	
R53	⚠ 1-247-855-91	CARBON	10K	5%	1/4W	
R54	⚠ 9-936-114-01	CEMENT	220		5W	
R55	⚠ 9-936-115-01	CEMENT	2.2		5W	
R56	⚠ 9-936-115-01	CEMENT	2.2		5W	
R57	⚠ 9-936-115-01	CEMENT	2.2		5W	
R58	⚠ 9-936-115-01	CEMENT	2.2		5W	
R59	⚠ 1-247-897-91	CARBON	560K	5%	1/4W	
R60	⚠ 1-247-833-91	CARBON	1.2K	5%	1/4W	
R61	⚠ 1-247-897-91	CARBON	560K	5%	1/4W	
R62	⚠ 1-247-851-91	CARBON	6.8K	5%	1/4W	
R63	⚠ 1-247-895-91	CARBON	470K	5%	1/4W	
R64	⚠ 1-247-851-91	CARBON	6.8K	5%	1/4W	
R65	⚠ 1-247-837-91	CARBON	1.8K	5%	1/4W	
R66	⚠ 1-247-861-91	CARBON	18K	5%	1/4W	
R67	⚠ 1-247-807-91	CARBON	100	5%	1/4W	
R68	⚠ 1-247-835-91	CARBON	1.5K	5%	1/4W	
R69	⚠ 1-247-843-91	CARBON	3.3K	5%	1/4W	
R70	⚠ 1-247-837-91	CARBON	1.8K	5%	1/4W	
R71	⚠ 1-247-831-91	CARBON	1K	5%	1/4W	
R72	⚠ 1-247-783-91	CARBON	10	5%	1/4W	
R73	⚠ 1-247-831-91	CARBON	1K	5%	1/4W	
R74	⚠ 1-247-823-91	CARBON	470	5%	1/4W	
R75	⚠ 1-247-855-91	CARBON	10K	5%	1/4W	
R76	⚠ 1-247-847-91	CARBON	4.7K	5%	1/4W	
R77	⚠ 1-247-839-91	CARBON	2.2K	5%	1/4W	
R78	⚠ 1-244-945-91	CARBON	1M	5%	1/2W	
R79	⚠ 1-247-807-91	CARBON	100	5%	1/4W	
R80	⚠ 1-247-787-91	CARBON	15	5%	1/4W	
R81	⚠ 1-247-843-91	CARBON	3.3K	5%	1/4W	
R82	⚠ 1-247-807-91	CARBON	100	5%	1/4W	
R83	⚠ 1-247-787-91	CARBON	15	5%	1/4W	
R84	⚠ 1-247-843-91	CARBON	3.3K	5%	1/4W	
R85	⚠ 1-247-835-91	CARBON	1.5K	5%	1/4W	
R86	⚠ 1-247-807-91	CARBON	100	5%	1/4W	
R87	⚠ 1-218-642-91	METAL OXIDE	100K	5%	1W	F
R88	⚠ 1-218-642-91	METAL OXIDE	100K	5%	1W	F
R89	⚠ 1-247-775-91	CARBON	4.7	5%	1/4W	
R90	⚠ 1-247-799-91	CARBON	47	5%	1/2W	
R100	⚠ 1-216-349-91	METAL OXIDE	1	5%	1W	F
R101	⚠ 1-247-844-91	CARBON	3.6K	5%	1/4W	
R102	⚠ 1-247-867-91	CARBON	33K	5%	1/4W	
R103	⚠ 1-247-862-91	CARBON	20K	5%	1/4W	
R104	⚠ 1-247-883-91	CARBON	150K	5%	1/4W	
R106	⚠ 1-215-903-91	METAL OXIDE	68K	5%	2W	F
R107	⚠ 1-244-841-91	CARBON	47	5%	1/2W	
R108	⚠ 1-244-873-91	CARBON	1K	5%	1/2W	F
R109	⚠ 1-247-775-91	CARBON	4.7	5%	1/4W	
R110	⚠ 1-247-831-91	CARBON	1K	5%	1/4W	
R111	⚠ 1-247-848-91	CARBON	5.1K	5%	1/4W	
R112	⚠ 1-247-799-91	CARBON	47	5%	1/2W	
R114	⚠ 1-216-369-91	METAL OXIDE	1	5%	2W	F
R115	⚠ 1-247-823-91	CARBON	470	5%	1/4W	
R116	⚠ 1-247-847-91	CARBON	4.7K	5%	1/4W	
R117	⚠ 1-247-835-91	CARBON	1.5K	5%	1/4W	
R118	⚠ 1-215-878-91	METAL OXIDE	33K	5%	1W	F
R119	⚠ 1-215-878-91	METAL OXIDE	33K	5%	1W	F
R120	⚠ 1-247-883-91	CARBON	150K	5%	1/4W	
R121	⚠ 1-247-831-91	CARBON	1K	5%	1/4W	
R122	⚠ 1-247-831-91	CARBON	1K	5%	1/4W	
R123	⚠ 1-247-847-91	CARBON	4.7K	5%	1/4W	
R124	⚠ 1-247-865-91	CARBON	27K	5%	1/4W	
R125	⚠ 1-247-865-91	CARBON	27K	5%	1/4W	
R126	⚠ 1-247-847-91	CARBON	4.7K	5%	1/4W	
R127	⚠ 1-247-887-91	CARBON	220K	5%	1/4W	
R128	⚠ 1-247-877-91	CARBON	82K	5%	1/4W	
R129	⚠ 1-247-844-91	CARBON	3.6K	5%	1/4W	
R130	⚠ 1-247-847-91	CARBON	4.7K	5%	1/4W	
R131	⚠ 1-247-887-91	CARBON	220K	5%	1/4W	
R132	⚠ 1-247-847-91	CARBON	4.7K	5%	1/4W	
R133	⚠ 1-247-883-91	CARBON	150K	5%	1/4W	
R200	⚠ 1-247-819-91	CARBON	330	5%	1/4W	
R201	⚠ 1-247-831-91	CARBON	1K	5%	1/4W	

<TRANSFORMER>

T1	⚠ 9-936-192-01	TRANSFORMER		
T2	⚠ 9-936-289-01	TRANSFORMER	2.5A	600UH

<THERMO STTATE>

TH1	⚠ 9-936-132-01	THERMO STTATE	13A/230V
TH2	⚠ 9-936-275-01	THERMO STTATE	0.5A/150V
TH3	⚠ 9-936-276-01	THERMO STTATE	0.5A/150V

<THERMISTOR>

TM10	⚠ 9-936-133-01	THERMISTOR	1.6A

****

⚠ 9-936-104-01 U3 BOARD, COMPLETE
****

<CAPACITOR>

C100	⚠ 9-936-117-01	FILM	0.68MF		630V
C102	⚠ 9-936-120-01	CERAMIC	220PF		2KV
C103	⚠ 1-136-209-61	FILM	0.1MF	10%	630V
C104	⚠ 9-936-121-01	CERAMIC	220PF		400V
C105	⚠ 9-936-121-01	CERAMIC	220PF		400V
C205	⚠ 1-110-600-11	ELECT	120MF	20%	25V
C213	⚠ 1-137-198-81	FILM	1MF	5%	50V
C216	⚠ 1-137-194-81	FILM	0.47MF	5%	50V
C221	⚠ 1-137-194-81	FILM	0.47MF	5%	50V
C246	⚠ 9-936-145-01	FILM	0.001MF		500V
C247	⚠ 9-936-145-01	FILM	0.001MF		500V
C248	⚠ 9-936-145-01	FILM	0.001MF		500V
C249	⚠ 9-936-145-01	FILM	0.001MF		500V
C250	⚠ 1-124-599-11	ELECT	220MF	20%	25V
C251	⚠ 1-110-399-91	ELECT	1500MF	20%	10V
C252	⚠ 1-110-399-91	ELECT	1500MF	20%	10V
C255	⚠ 1-128-127-11	ELECT	2200MF	20%	25V
C256	⚠ 1-124-599-11	ELECT	220MF	20%	25V
C257	⚠ 1-136-493-81	FILM	0.047MF	5%	50V
C258	⚠ 1-130-471-91	FILM	0.001MF	5%	50V
C259	⚠ 1-136-493-81	FILM	0.047MF	5%	50V
C260	⚠ 1-130-471-91	FILM	0.001MF	5%	50V
C261	⚠ 1-128-127-11	ELECT	2200MF	20%	25V
C262	⚠ 1-128-127-11	ELECT	2200MF	20%	25V
C263	⚠ 1-128-127-11	ELECT	2200MF	20%	25V
C264	⚠ 1-128-127-11	ELECT	2200MF	20%	25V
C265	⚠ 1-124-571-11	ELECT	270MF	20%	25V
C266	⚠ 1-110-399-91	ELECT	1500MF	20%	10V
C267	⚠ 1-110-399-91	ELECT	1500MF	20%	10V
C268	⚠ 1-128-127-11	ELECT	2200MF	20%	25V
C269	⚠ 1-136-203-61	FILM	0.01MF	10%	630V

U3

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION			REMARK
C271	⚠ 1-136-203-61	FILM	0.01MF	10%	630V
C272	⚠ 1-136-203-61	FILM	0.01MF	10%	630V
C273	⚠ 1-136-203-61	FILM	0.01MF	10%	630V
C300	⚠ 9-936-120-01	CERAMIC	220PF		2KV
C301	⚠ 1-136-209-61	FILM	0.1MF	10%	630V
C405	⚠ 1-110-600-11	ELECT	120MF	20%	25V
C413	⚠ 1-137-198-81	FILM	1MF	5%	50V
C416	⚠ 1-137-194-91	FILM	0.47MF	5%	50V
C421	⚠ 1-130-479-91	FILM	0.0047MF	5%	50V
C425	⚠ 9-936-146-01	CERAMIC	470PF		500V
C426	⚠ 9-936-146-01	CERAMIC	470PF		500V
C427	⚠ 9-936-147-01	ELECT	390MF		80V
C428	⚠ 9-936-147-01	ELECT	390MF		80V
C429	⚠ 9-936-147-01	ELECT	390MF		80V
C430	⚠ 9-936-147-01	ELECT	390MF		80V
C431	⚠ 9-936-147-01	ELECT	390MF		80V
C432	⚠ 9-936-147-01	ELECT	390MF		80V
C433	⚠ 1-136-203-61	FILM	0.01MF	10%	630V
C434	⚠ 1-535-303-21	JUMPER 0.6MM			
C436	⚠ 1-136-203-61	FILM	0.01MF	10%	630V
C500	⚠ 9-936-120-01	CERAMIC	220PF		2KV
C501	⚠ 1-136-209-61	FILM	0.1MF	10%	630V
C502	⚠ 9-936-121-01	CERAMIC	220PF		400V
C602	⚠ 1-110-600-11	ELECT	120MF	20%	25V
C603	⚠ 1-137-198-81	FILM	1MF	5%	50V
C604	⚠ 1-137-194-91	FILM	0.47MF	5%	50V
C606	⚠ 1-136-203-61	FILM	0.01MF	10%	630V
C608	⚠ 1-136-203-61	FILM	0.01MF	10%	630V
C609	⚠ 1-124-970-91	ELECT	68MF	20%	50V
C610	⚠ 9-936-148-01	CERAMIC	100PF		2KV
C611	⚠ 9-936-148-01	CERAMIC	100PF		2KV
C612	⚠ 9-936-148-01	CERAMIC	100PF		2KV
C613	⚠ 9-936-148-01	CERAMIC	100PF		2KV
C614	⚠ 1-104-808-51	ELECT	47MF		160V
C615	⚠ 9-936-149-01	ELECT	270MF		100V
C618	⚠ 9-936-150-01	ELECT	68MF		50V
C619	⚠ 9-936-149-01	ELECT	270MF		100V
C620	⚠ 9-936-149-01	ELECT	270MF		100V
C621	⚠ 9-936-149-01	ELECT	270MF		100V
C622	⚠ 1-107-492-51	ELECT	47MF	20%	160V
C623	⚠ 1-107-492-51	ELECT	47MF	20%	160V
C624	⚠ 1-107-492-51	ELECT	47MF	20%	160V
C625	⚠ 9-936-149-01	ELECT	270MF		100V
C626	⚠ 9-936-149-01	ELECT	270MF		100V
C627	⚠ 1-107-492-51	ELECT	47MF	20%	160V
C628	⚠ 1-107-492-51	ELECT	47MF	20%	160V
C629	⚠ 1-136-203-61	FILM	0.01MF	10%	630V
C631	⚠ 1-130-483-91	FILM	0.01MF	5%	50V
C632	⚠ 1-130-483-91	FILM	0.01MF	5%	50V
C633	⚠ 1-136-203-61	FILM	0.01MF	10%	630V
C709	⚠ 1-124-598-91	ELECT	22MF	20%	25V
C711	⚠ 1-136-497-81	FILM	0.1MF	5%	50V
C900	⚠ 9-936-151-01	ELECT	560MF		10V
C901	⚠ 9-936-151-01	ELECT	560MF		10V
C902	⚠ 1-136-497-81	FILM	0.1MF	5%	50V

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN6	⚠ 9-936-111-01	CONNECTOR 3P	
CN8	⚠ 9-936-175-01	CONNECTOR 6P	
CN9	⚠ 9-936-176-01	CONNECTOR 3P	
CN10	⚠ 9-936-176-01	CONNECTOR 3P	
CN11	⚠ 9-936-177-01	CONNECTOR 10P	
CN12	⚠ 9-936-178-01	CONNECTOR 9P	

<TRIMMER>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CT1	⚠ 9-936-170-01	TRIMMER	
CT2	⚠ 9-936-170-01	TRIMMER	
CT3	⚠ 9-936-170-01	TRIMMER	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D100	⚠ 8-719-947-85	DIODE ERB44-08	
D101	⚠ 9-936-154-01	DIODE 15DF8	
D102	⚠ 8-719-947-85	DIODE ERB44-08	
D204	⚠ 8-719-922-20	DIODE 1SS120TD	
D246	⚠ 8-719-302-60	DIODE FML-32S	
D248	⚠ 9-936-155-01	DIODE FMB-26L	
D249	⚠ 9-936-124-01	DIODE AL01Z-V0	
D250	⚠ 9-936-155-01	DIODE FMB-26L	
D251	⚠ 9-936-124-01	DIODE AL01Z-V0	
D252	⚠ 8-719-302-60	DIODE FML-32S	
D300	⚠ 8-719-947-85	DIODE ERB44-08	
D301	⚠ 9-936-154-01	DIODE 15DF8	
D302	⚠ 8-719-947-85	DIODE ERB44-08	
D404	⚠ 8-719-922-20	DIODE 1SS120TD	
D408	⚠ 9-936-126-01	DIODE FML-36S	
D409	⚠ 9-936-126-01	DIODE FML-36S	
D500	⚠ 8-719-947-85	DIODE ERB44-08	
D501	⚠ 9-936-154-01	DIODE 15DF8	
D502	⚠ 8-719-947-85	DIODE ERB44-08	
D601	⚠ 8-719-922-20	DIODE 1SS120TD	
D603	⚠ 9-936-156-01	DIODE ESAD39M-06D	
D606	⚠ 8-719-051-96	DIODE FMG-G2CS	
D607	⚠ 8-719-051-96	DIODE FMG-G2CS	
D736	⚠ 8-719-922-20	DIODE 1SS120TD	
D737	⚠ 8-719-922-20	DIODE 1SS120TD	
D738	⚠ 8-719-922-20	DIODE 1SS120TD	
ZD602	⚠ 9-936-157-01	DIODE HZS12A1TD	
ZD603	⚠ 9-936-158-01	DIODE HZS36-3TD	
ZD604	⚠ 9-936-158-01	DIODE HZS36-3TD	
ZD605	⚠ 9-936-158-01	DIODE HZS36-3TD	
ZD606	⚠ 9-936-157-01	DIODE HZS12A1TD	
ZD607	⚠ 9-936-127-01	DIODE HZS12A3TD	
ZD700	⚠ 9-936-159-01	DIODE HZS6C2TD	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC203	⚠ 8-759-604-39	IC M5F78M12L	
IC204	⚠ 8-759-285-26	IC HA17431P	
IC205	⚠ 8-759-285-26	IC HA17431P	
IC900	⚠ 8-759-143-00	IC UPC7805HF	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L200	⚠ 9-936-160-01	INDUCTOR	
L201	⚠ 9-936-161-01	MAG AMP	
L202	⚠ 9-936-162-01	INDUCTOR	
L203	⚠ 9-936-161-01	MAG AMP	
L204	⚠ 9-936-162-01	INDUCTOR	
L250	⚠ 9-936-163-01	INDUCTOR 3A 4.7UH	
L251	⚠ 9-936-163-01	INDUCTOR 3A 4.7UH	
L252	⚠ 9-936-164-01	INDUCTOR 12A 2.2UH	
L253	⚠ 9-936-165-01	INDUCTOR	
L254	⚠ 9-936-164-01	INDUCTOR 12A 2.2UH	
L400	⚠ 9-936-166-01	INDUCTOR	
L401	⚠ 9-936-167-01	INDUCTOR 7A 4.7UH	

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
L402	⚠9-936-167-01	INDUCTOR 7A 4.7UH	
L600	⚠9-936-168-01	INDUCTOR 3.5A 220UH	
L601	⚠9-936-168-01	INDUCTOR 3.5A 220UH	
L602	⚠9-936-169-01	INDUCTOR 2A 100UH	
L603	⚠9-936-169-01	INDUCTOR 2A 100UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q100	⚠9-936-153-01	TRANSISTOR 2SK1796	
Q101	⚠9-936-153-01	TRANSISTOR 2SK1796	
Q201	⚠8-729-206-12	TRANSISTOR 2SA1244Y	
Q203	⚠8-729-205-88	TRANSISTOR 2SC3074Y	
Q246	⚠9-936-152-01	TRANSISTOR 2SA1388Y	
Q247	⚠9-936-152-01	TRANSISTOR 2SA1388Y	
Q300	⚠9-936-153-01	TRANSISTOR 2SK1796	
Q301	⚠9-936-153-01	TRANSISTOR 2SK1796	
Q401	⚠8-729-206-12	TRANSISTOR 2SA1244Y	
Q403	⚠8-729-205-88	TRANSISTOR 2SC3074Y	
Q500	⚠9-936-153-01	TRANSISTOR 2SK1796	
Q501	⚠9-936-153-01	TRANSISTOR 2SK1796	
Q502	⚠9-936-153-01	TRANSISTOR 2SK1796	
Q600	⚠8-729-206-12	TRANSISTOR 2SA1244Y	
Q601	⚠8-729-205-88	TRANSISTOR 2SC3074Y	
Q604	⚠8-729-205-97	TRANSISTOR 2SC3668Y	
Q605	⚠8-729-205-97	TRANSISTOR 2SC3668Y	
Q715	⚠8-729-205-97	TRANSISTOR 2SC3668Y	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R100	⚠1-247-787-91	CARBON	15	5%	1/4W	
R101	⚠1-247-787-91	CARBON	15	5%	1/4W	
R102	⚠1-247-831-91	CARBON	1K	5%	1/4W	
R103	⚠1-247-831-91	CARBON	1K	5%	1/4W	
R104	⚠9-936-114-01		220		5W	
R105	⚠1-244-945-91	CARBON	1M	5%	1/2W	
R204	⚠1-247-839-91	CARBON	2.2K	5%	1/4W	
R212	⚠1-247-807-91	CARBON	100	5%	1/4W	
R223	⚠1-247-853-91	CARBON	8.2K	5%	1/4W	
R229	⚠1-247-853-91	CARBON	8.2K	5%	1/4W	
R230	⚠1-215-865-91	METAL OXIDE	220	5%	1W	F
R232	⚠1-247-831-91	CARBON	1K	5%	1/4W	
R234	⚠1-247-863-91	CARBON	22K	5%	1/4W	
R235	⚠1-247-863-91	CARBON	22K	5%	1/4W	
R236	⚠1-247-863-91	CARBON	22K	5%	1/4W	
R238	⚠1-247-864-91	CARBON	24K	5%	1/4W	
R240	⚠1-247-807-91	CARBON	100	5%	1/4W	
R246	⚠1-215-884-91	METAL OXIDE	47	5%	2W	F
R247	⚠1-215-861-91	METAL OXIDE	47	5%	1W	F
R248	⚠1-215-865-91	METAL OXIDE	220	5%	1W	F
R249	⚠9-936-138-01		0.01		2W	
R250	⚠1-247-807-91	CARBON	100	5%	1/4W	
R251	⚠1-247-807-91	CARBON	100	5%	1/4W	
R252	⚠1-215-861-91	METAL OXIDE	47	5%	1W	F
R253	⚠1-215-865-91	METAL OXIDE	220	5%	1W	F
R254	⚠9-936-138-01		0.01		2W	
R255	⚠1-247-807-91	CARBON	100	5%	1/4W	
R256	⚠1-247-807-91	CARBON	100	5%	1/4W	
R257	⚠1-215-884-91	METAL OXIDE	47	5%	2W	F
R258	⚠9-936-139-01		0.01		5W	
R259	⚠9-936-139-01		0.01		5W	
R260	⚠1-247-807-91	CARBON	100	5%	1/4W	
R261	⚠1-247-807-91	CARBON	100	5%	1/4W	
R262	⚠1-247-783-91	CARBON	10	5%	1/4W	
R263	⚠1-247-819-91	CARBON	330	5%	1/4W	
R264	⚠1-247-824-91	CARBON	510	5%	1/4W	
R265	⚠1-247-783-91	CARBON	10	5%	1/4W	
R266	⚠1-247-819-91	CARBON	330	5%	1/4W	
R267	⚠1-247-824-91	CARBON	510	5%	1/4W	
R268	⚠9-936-139-01	CEMENT	0.01		5W	
R269	⚠9-936-139-01	CEMENT	0.01		5W	
R270	⚠1-247-807-91	CARBON	100	5%	1/4W	
R271	⚠1-247-807-91	CARBON	100	5%	1/4W	
R272	⚠1-247-791-91	CARBON	22	5%	1/4W	
R273	⚠1-247-839-91	CARBON	2.2K	5%	1/4W	
R274	⚠1-247-848-91	CARBON	5.1K	5%	1/4W	
R275	⚠1-247-791-91	CARBON	22	5%	1/4W	
R276	⚠1-247-839-91	CARBON	2.2K	5%	1/4W	
R277	⚠1-247-848-91	CARBON	5.1K	5%	1/4W	
R278	⚠1-215-869-91	METAL OXIDE	1K	5%	1W	F
R279	⚠1-247-840-91	CARBON	2.4K	5%	1/4W	
R280	⚠1-247-843-91	CARBON	3.3K	5%	1/4W	
R281	⚠1-215-873-91	METAL OXIDE	4.7K	5%	1W	F
R282	⚠1-247-843-91	CARBON	3.3K	5%	1/4W	
R283	⚠1-215-873-91	METAL OXIDE	4.7K	5%	1W	F
R284	⚠1-215-869-91	METAL OXIDE	1K	5%	1W	F
R285	⚠1-247-831-91	CARBON	1K	5%	1/4W	
R286	⚠1-216-349-91	METAL OXIDE	1	5%	1W	F
R300	⚠1-247-787-91	CARBON	15	5%	1/4W	
R301	⚠1-247-831-91	CARBON	1K	5%	1/4W	
R302	⚠9-936-114-01	CEMENT	220		5W	
R303	⚠1-247-787-91	CARBON	15	5%	1/4W	
R304	⚠1-247-831-91	CARBON	1K	5%	1/4W	
R404	⚠1-247-839-91	CARBON	2.2K	5%	1/4W	
R412	⚠1-247-807-91	CARBON	100	5%	1/4W	
R423	⚠1-247-853-91	CARBON	8.2K	5%	1/4W	
R429	⚠1-247-853-91	CARBON	8.2K	5%	1/4W	
R430	⚠1-215-865-91	METAL OXIDE	220	5%	1W	F
R432	⚠1-247-831-91	CARBON	1K	5%	1/4W	
R434	⚠1-247-871-91	CARBON	47K	5%	1/4W	
R435	⚠1-247-871-91	CARBON	47K	5%	1/4W	
R436	⚠1-247-807-91	CARBON	100	5%	1/4W	
R437	⚠1-247-863-91	CARBON	22K	5%	1/4W	
R439	⚠1-247-871-91	CARBON	47K	5%	1/4W	
R440	⚠1-247-871-91	CARBON	47K	5%	1/4W	
R446	⚠1-215-884-91	METAL OXIDE	47	5%	2W	F
R447	⚠1-215-884-91	METAL OXIDE	47	5%	2W	F
R448	⚠9-936-139-01	CEMENT	0.01		5W	
R449	⚠1-247-807-91	CARBON	100	5%	1/4W	
R450	⚠1-247-807-91	CARBON	100	5%	1/4W	
R451	⚠9-936-139-01	CEMENT	0.01		5W	
R452	⚠1-247-807-91	CARBON	100	5%	1/4W	
R453	⚠1-247-807-91	CARBON	100	5%	1/4W	
R454	⚠1-215-875-91	METAL OXIDE	10K	5%	1W	F
R455	⚠1-215-875-91	METAL OXIDE	10K	5%	1W	F
R500	⚠1-247-783-91	CARBON	10	5%	1/4W	
R501	⚠1-247-783-91	CARBON	10	5%	1/4W	
R502	⚠1-247-831-91	CARBON	1K	5%	1/4W	
R503	⚠1-247-831-91	CARBON	1K	5%	1/4W	
R504	⚠9-936-139-01	CEMENT	0.01		5W	
R505	⚠1-247-783-91	CARBON	10	5%	1/4W	
R506	⚠1-247-831-91	CARBON	1K	5%	1/4W	
R602	⚠1-247-839-91	CARBON	2.2K	5%	1/4W	
R606	⚠1-247-807-91	CARBON	100	5%	1/4W	
R607	⚠1-247-853-91	CARBON	8.2K	5%	1/4W	
R608	⚠1-247-853-91	CARBON	8.2K	5%	1/4W	
R611	⚠1-247-877-91	CARBON	82K	5%	1/4W	
R612	⚠1-247-871-91	CARBON	47K	5%	1/4W	
R615	⚠1-215-865-91	METAL OXIDE	220	5%	1W	F

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R616	⚠1-247-903-91	CARBON	1M	5%	1/4W	
R617	⚠1-247-903-91	CARBON	1M	5%	1/4W	
R618	⚠1-215-886-91	METAL OXIDE	100	5%	2W	F
R621	⚠1-215-886-91	METAL OXIDE	100	5%	2W	F
R623	⚠1-215-886-91	METAL OXIDE	100	5%	2W	F
R624	⚠9-936-139-01	CEMENT	0.01		5W	
R625	⚠1-247-807-91	CARBON	100	5%	1/4W	
R626	⚠1-215-886-91	METAL OXIDE	100	5%	2W	F
R629	⚠9-936-140-01	CEMENT	0.1		2W	
R630	⚠1-247-807-91	CARBON	100	5%	1/4W	
R632	⚠1-247-807-91	CARBON	100	5%	1/4W	
R633	⚠1-247-807-91	CARBON	100	5%	1/4W	
R634	⚠1-247-823-91	CARBON	470	5%	1/4W	
R635	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R636	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R637	⚠1-260-123-91	CARBON	100K	5%	1/2W	
R638	⚠1-260-123-91	CARBON	100K	5%	1/2W	
R639	⚠1-260-123-91	CARBON	100K	5%	1/2W	
R640	⚠1-260-123-91	CARBON	100K	5%	1/2W	
R641	⚠1-247-855-91	CARBON	10K	5%	1/4W	
R642	⚠1-247-866-91	CARBON	30K	5%	1/4W	
R643	⚠9-936-141-01		100K		1W	
R645	⚠9-936-141-01		100K		1W	
R647	⚠1-215-904-91	METAL OXIDE	100K	5%	2W	F
R648	⚠1-215-904-91	METAL OXIDE	100K	5%	2W	F
R649	⚠1-247-862-91	CARBON	20K	5%	1/4W	
R650	⚠1-247-831-91	CARBON	1K	5%	1/4W	
R651	⚠1-247-831-91	CARBON	1K	5%	1/4W	
R652	⚠1-247-863-91	CARBON	22K	5%	1/4W	
R801	⚠1-247-851-91	CARBON	6.8K	5%	1/4W	
R802	⚠1-247-851-91	CARBON	6.8K	5%	1/4W	
R808	⚠1-247-831-91	CARBON	1K	5%	1/4W	
R809	⚠1-247-862-91	CARBON	20K	5%	1/4W	
R810	⚠1-247-862-91	CARBON	20K	5%	1/4W	
R811	⚠1-247-879-91	CARBON	100K	5%	1/4W	
R812	⚠1-247-855-91	CARBON	10K	5%	1/4W	
R900	⚠1-247-848-91	CARBON	5.1K	5%	1/4W	

<VARIABLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION		
RV200	⚠9-936-142-01	RES, ADJ	5K	1/2W
RV201	⚠9-936-142-01	RES, ADJ	5K	1/2W
RV246	⚠9-936-143-01	RES, ADJ	1K	1/2W
RV247	⚠9-936-143-01	RES, ADJ	1K	1/2W
RV400	⚠9-936-142-01	RES, ADJ	5K	1/2W
RV401	⚠9-936-144-01	RES, ADJ	10K	1/2W
RV600	⚠9-936-144-01	RES, ADJ	10K	1/2W
RV601	⚠9-936-142-01	RES, ADJ	5K	1/2W

<TRANSFORMER>

REF.NO.	PART NO.	DESCRIPTION
T3	⚠9-936-171-01	TRANSFORMER
T4	⚠9-936-172-01	TRANSFORMER
T5	⚠9-936-171-01	TRANSFORMER
T6	⚠9-936-173-01	TRANSFORMER
T7	⚠9-936-171-01	TRANSFORMER
T8	⚠9-936-174-01	TRANSFORMER

****

⚠9-936-105-01 U4 BOARD, COMPLETE
****

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C2	⚠1-130-471-91	FILM	0.001MF	5%	50V
C3	⚠1-130-483-91	FILM	0.01MF	5%	50V
C5	⚠1-130-471-91	FILM	0.001MF	5%	50V
C6	⚠1-130-471-91	FILM	0.001MF	5%	50V
C8	⚠1-130-471-91	FILM	0.001MF	5%	50V
C9	⚠1-130-471-91	FILM	0.001MF	5%	50V
C10	⚠1-137-194-81	FILM	4.7MF	5%	50V
C11	⚠1-136-497-81	FILM	0.1MF	5%	50V
C12	⚠1-137-194-81	FILM	4.7MF	5%	50V
C13	⚠1-130-471-91	FILM	0.001MF	5%	50V
C14	⚠9-936-118-01	CERAMIC	100PF		50V
C15	⚠1-136-497-81	FILM	0.1MF	5%	50V
C16	⚠9-936-118-01	CERAMIC	100PF		50V
C17	⚠1-130-471-91	FILM	0.001MF	5%	50V
C18	⚠9-936-118-01	CERAMIC	100PF		50V
C19	⚠1-137-194-81	FILM	4.7MF	5%	50V
C20	⚠9-936-118-01	CERAMIC	100PF		50V
C21	⚠1-130-471-91	FILM	0.001MF	5%	50V
C22	⚠1-130-471-91	FILM	0.001MF	5%	50V
C23	⚠1-130-471-91	FILM	0.001MF	5%	50V
C25	⚠1-130-471-91	FILM	0.001MF	5%	50V
C27	⚠1-130-471-91	FILM	0.001MF	5%	50V
C28	⚠1-126-375-91	ELECT	100PF	20%	25V
C29	⚠1-126-375-91	ELECT	100PF	20%	25V
C30	⚠1-126-375-91	ELECT	100PF	20%	25V
C31	⚠1-126-375-91	ELECT	100PF	20%	25V
C32	⚠1-126-512-91	ELECT	4.7MF	20%	50V
C33	⚠9-936-179-01	CERAMIC	10MF		25V
C34	⚠1-126-512-91	ELECT	4.7MF	20%	50V
C35	⚠9-936-180-01	CERAMIC	4.7MF		25V
C36	⚠1-126-512-91	ELECT	4.7MF	20%	50V
C37	⚠1-130-471-91	FILM	0.001MF	5%	50V
C38	⚠1-130-471-91	FILM	0.001MF	5%	50V
C39	⚠1-130-471-91	FILM	0.001MF	5%	50V
C40	⚠1-130-471-91	FILM	0.001MF	5%	50V
C41	⚠9-936-118-01	CERAMIC	100PF		50V
C42	⚠1-136-497-81	FILM	0.1MF	5%	50V
C43	⚠9-936-118-01	CERAMIC	100PF		50V
C44	⚠1-136-497-81	FILM	0.1MF	5%	50V
C45	⚠1-130-471-91	FILM	0.001MF	5%	50V
C46	⚠1-130-471-91	FILM	0.001MF	5%	50V
C47	⚠1-130-471-91	FILM	0.001MF	5%	50V
C48	⚠1-130-471-91	FILM	0.001MF	5%	50V
C49	⚠9-936-118-01	CERAMIC	100PF		50V
C50	⚠1-136-497-81	FILM	0.1MF	5%	50V
C51	⚠9-936-118-01	CERAMIC	100PF		50V
C52	⚠1-136-497-81	FILM	0.1MF	5%	50V
C53	⚠1-136-497-81	FILM	0.1MF	5%	50V
C54	⚠1-130-471-91	FILM	0.001MF	5%	50V
C55	⚠1-130-471-91	FILM	0.001MF	5%	50V
C56	⚠1-136-497-81	FILM	0.1MF	5%	50V
C57	⚠1-130-471-91	FILM	0.001MF	5%	50V
C58	⚠1-130-471-91	FILM	0.001MF	5%	50V
C59	⚠9-936-118-01	CERAMIC	100PF		50V
C60	⚠1-136-497-81	FILM	0.1MF	5%	50V
C61	⚠9-936-118-01	CERAMIC	100PF		50V
C62	⚠1-136-497-81	FILM	0.1MF	5%	50V
C63	⚠1-130-471-91	FILM	0.001MF	5%	50V
C64	⚠1-130-471-91	FILM	0.001MF	5%	50V
C65	⚠9-936-118-01	CERAMIC	100PF		50V
C66	⚠1-130-471-91	FILM	0.001MF	5%	50V
C67	⚠1-130-471-91	FILM	0.001MF	5%	50V
C68	⚠9-936-118-01	CERAMIC	100PF		50V

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

U4

REF.NO.	PART NO.	DESCRIPTION			REMARK
C69	⚠ 1-136-497-81	FILM	0.1MF	5%	50V
C70	⚠ 1-136-497-81	FILM	0.1MF	5%	50V
C101	⚠ 1-126-233-91	ELECT	22MF	20%	50V
C102	⚠ 1-126-512-91	ELECT	4.7MF	20%	50V
C103	⚠ 1-126-233-91	ELECT	22MF	20%	50V
C105	⚠ 1-126-233-91	ELECT	22MF	20%	50V
C106	⚠ 1-136-497-81	FILM	0.1MF	5%	50V
C107	⚠ 1-126-512-91	ELECT	4.7MF	20%	50V
C108	⚠ 1-126-233-91	ELECT	22MF	20%	50V
C109	⚠ 1-126-512-91	ELECT	4.7MF	20%	50V
C110	⚠ 1-126-233-91	ELECT	22MF	20%	50V
C111	⚠ 1-137-190-81	FILM	0.22MF	5%	50V

<DIODE>

D3	⚠ 8-719-922-20	DIODE 1SS120TD
D4	⚠ 8-719-922-20	DIODE 1SS120TD
D5	⚠ 8-719-922-20	DIODE 1SS120TD
D6	⚠ 8-719-922-20	DIODE 1SS120TD
D7	⚠ 8-719-922-20	DIODE 1SS120TD
D8	⚠ 8-719-922-20	DIODE 1SS120TD
D9	⚠ 8-719-922-20	DIODE 1SS120TD
D10	⚠ 8-719-922-20	DIODE 1SS120TD
D11	⚠ 8-719-922-20	DIODE 1SS120TD
D12	⚠ 8-719-922-20	DIODE 1SS120TD
D13	⚠ 8-719-922-20	DIODE 1SS120TD
D14	⚠ 8-719-922-20	DIODE 1SS120TD
D15	⚠ 8-719-922-20	DIODE 1SS120TD
D16	⚠ 8-719-922-20	DIODE 1SS120TD
D101	⚠ 8-719-922-20	DIODE 1SS120TD
D102	⚠ 8-719-922-20	DIODE 1SS120TD
D105	⚠ 8-719-922-20	DIODE 1SS120TD
D106	⚠ 8-719-922-20	DIODE 1SS120TD
D107	⚠ 8-719-922-20	DIODE 1SS120TD
D108	⚠ 8-719-922-20	DIODE 1SS120TD
D109	⚠ 8-719-922-20	DIODE 1SS120TD
D110	⚠ 8-719-922-20	DIODE 1SS120TD
D111	⚠ 8-719-922-20	DIODE 1SS120TD
D112	⚠ 8-719-922-20	DIODE 1SS120TD
D113	⚠ 8-719-922-20	DIODE 1SS120TD
D114	⚠ 8-719-922-20	DIODE 1SS120TD
D115	⚠ 8-719-922-20	DIODE 1SS120TD
D116	⚠ 8-719-922-20	DIODE 1SS120TD
D117	⚠ 8-719-922-20	DIODE 1SS120TD
D118	⚠ 8-719-922-20	DIODE 1SS120TD
D119	⚠ 8-719-922-20	DIODE 1SS120TD
D120	⚠ 8-719-922-20	DIODE 1SS120TD
D121	⚠ 8-719-922-20	DIODE 1SS120TD
D122	⚠ 8-719-922-20	DIODE 1SS120TD
D123	⚠ 8-719-922-20	DIODE 1SS120TD
D124	⚠ 8-719-922-20	DIODE 1SS120TD
D125	⚠ 8-719-922-20	DIODE 1SS120TD
D126	⚠ 8-719-922-20	DIODE 1SS120TD
D127	⚠ 8-719-922-20	DIODE 1SS120TD
D128	⚠ 8-719-922-20	DIODE 1SS120TD
D129	⚠ 8-719-922-20	DIODE 1SS120TD
D130	⚠ 8-719-922-20	DIODE 1SS120TD

<IC>

IC1	⚠ 8-759-103-87	IC UPC494C
IC2	⚠ 8-759-103-87	IC UPC494C
IC3	⚠ 8-759-103-87	IC UPC494C
IC4	⚠ 8-759-144-17	IC UPC358HA

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC5	⚠ 8-759-144-17	IC UPC358HA	
IC6	⚠ 8-759-144-17	IC UPC358HA	
IC7	⚠ 8-759-144-17	IC UPC358HA	
IC8	⚠ 9-936-182-01	IC UPC393HA	
IC9	⚠ 9-936-182-01	IC UPC393HA	

<JACK>

J1	⚠ 9-936-184-01	SWITCH PM-10 (2P)

<TRANSISTOR>

Q3	⚠ 8-729-205-95	TRANSISTOR 2SA1428Y
Q4	⚠ 8-729-205-95	TRANSISTOR 2SA1428Y
Q5	⚠ 8-729-205-95	TRANSISTOR 2SA1428Y
Q101	⚠ 8-729-205-95	TRANSISTOR 2SA1428Y
Q102	⚠ 8-729-200-24	TRANSISTOR 2SC2458Y
Q103	⚠ 8-729-200-24	TRANSISTOR 2SC2458Y
Q104	⚠ 8-729-200-24	TRANSISTOR 2SC2458Y
Q105	⚠ 8-729-200-24	TRANSISTOR 2SC2458Y
Q106	⚠ 8-729-200-24	TRANSISTOR 2SC2458Y
Q107	⚠ 8-729-200-24	TRANSISTOR 2SC2458Y
Q108	⚠ 8-729-200-24	TRANSISTOR 2SC2458Y
Q109	⚠ 8-729-205-95	TRANSISTOR 2SA1428Y
Q110	⚠ 8-729-200-24	TRANSISTOR 2SC2458Y
Q111	⚠ 8-729-205-95	TRANSISTOR 2SA1428Y
Q112	⚠ 8-729-200-24	TRANSISTOR 2SC2458Y
Q113	⚠ 8-729-230-41	TRANSISTOR 2SA1048Y
Q114	⚠ 8-729-205-97	TRANSISTOR 2SC3668Y
Q115	⚠ 8-729-200-24	TRANSISTOR 2SC2458Y

<RESISTOR>

R1	⚠ 1-247-848-91	CARBON	5.1K	5%	1/4W
R2	⚠ 1-247-895-91	CARBON	470K	5%	1/4W
R3	⚠ 1-247-848-91	CARBON	5.1K	5%	1/4W
R4	⚠ 1-247-895-91	CARBON	470K	5%	1/4W
R7	⚠ 1-247-848-91	CARBON	5.1K	5%	1/4W
R8	⚠ 1-247-895-91	CARBON	470K	5%	1/4W
R11	⚠ 1-247-847-91	CARBON	4.7K	5%	1/4W
R12	⚠ 1-247-887-91	CARBON	220K	5%	1/4W
R13	⚠ 1-247-849-91	CARBON	5.6K	5%	1/4W
R14	⚠ 1-247-848-91	CARBON	5.1K	5%	1/4W
R15	⚠ 1-247-848-91	CARBON	5.1K	5%	1/4W
R16	⚠ 1-247-847-91	CARBON	4.7K	5%	1/4W
R17	⚠ 1-247-887-91	CARBON	220K	5%	1/4W
R18	⚠ 1-247-849-91	CARBON	5.6K	5%	1/4W
R19	⚠ 1-247-848-91	CARBON	5.1K	5%	1/4W
R20	⚠ 1-247-848-91	CARBON	5.1K	5%	1/4W
R21	⚠ 1-247-841-91	CARBON	2.7K	5%	1/4W
R22	⚠ 1-247-887-91	CARBON	220K	5%	1/4W
R23	⚠ 1-247-848-91	CARBON	5.1K	5%	1/4W
R24	⚠ 1-247-841-91	CARBON	2.7K	5%	1/4W
R25	⚠ 1-247-848-91	CARBON	5.1K	5%	1/4W
R26	⚠ 1-247-855-91	CARBON	10K	5%	1/4W
R27	⚠ 1-247-841-91	CARBON	2.7K	5%	1/4W
R30	⚠ 1-247-841-91	CARBON	2.7K	5%	1/4W
R33	⚠ 1-247-841-91	CARBON	2.7K	5%	1/4W
R34	⚠ 1-247-847-91	CARBON	4.7K	5%	1/4W
R35	⚠ 1-247-855-91	CARBON	10K	5%	1/4W
R36	⚠ 1-247-823-91	CARBON	470	5%	1/4W
R37	⚠ 1-247-847-91	CARBON	4.7K	5%	1/4W
R38	⚠ 1-247-847-91	CARBON	4.7K	5%	1/4W

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R39	⚠1-247-855-91	CARBON	10K	5%	1/4W	
R40	⚠1-247-823-91	CARBON	470	5%	1/4W	
R41	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R42	⚠1-247-823-91	CARBON	470	5%	1/4W	
R43	⚠1-247-855-91	CARBON	10K	5%	1/4W	
R44	⚠1-247-823-91	CARBON	470	5%	1/4W	
R45	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R46	⚠1-247-855-91	CARBON	10K	5%	1/4W	
R47	⚠1-247-855-91	CARBON	10K	5%	1/4W	
R48	⚠1-247-848-91	CARBON	5.1K	5%	1/4W	
R49	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R50	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R51	⚠1-247-887-91	CARBON	220K	5%	1/4W	
R52	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R53	⚠1-247-887-91	CARBON	220K	5%	1/4W	
R54	⚠1-247-857-91	CARBON	12K	5%	1/4W	
R55	⚠1-247-857-91	CARBON	12K	5%	1/4W	
R56	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R57	⚠1-247-848-91	CARBON	5.1K	5%	1/4W	
R58	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R59	⚠1-247-887-91	CARBON	220K	5%	1/4W	
R60	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R61	⚠1-247-887-91	CARBON	220K	5%	1/4W	
R62	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R63	⚠1-247-848-91	CARBON	5.1K	5%	1/4W	
R64	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R65	⚠1-247-848-91	CARBON	5.1K	5%	1/4W	
R66	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R67	⚠1-247-887-91	CARBON	220K	5%	1/4W	
R68	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R69	⚠1-247-887-91	CARBON	220K	5%	1/4W	
R70	⚠1-247-845-91	CARBON	3.9K	5%	1/4W	
R71	⚠1-247-844-91	CARBON	3.6K	5%	1/4W	
R72	⚠1-247-869-91	CARBON	39K	5%	1/4W	
R73	⚠1-247-869-91	CARBON	39K	5%	1/4W	
R74	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R75	⚠1-247-887-91	CARBON	220K	5%	1/4W	
R76	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R77	⚠1-247-887-91	CARBON	220K	5%	1/4W	
R101	⚠1-247-831-91	CARBON	1K	5%	1/4W	
R102	⚠1-247-851-91	CARBON	6.8K	5%	1/4W	
R103	⚠1-247-851-91	CARBON	6.8K	5%	1/4W	
R104	⚠1-247-869-91	CARBON	39K	5%	1/4W	
R105	⚠1-247-867-91	CARBON	33K	5%	1/4W	
R106	⚠1-247-873-91	CARBON	56K	5%	1/4W	
R107	⚠1-247-866-91	CARBON	30K	5%	1/4W	
R108	⚠1-247-851-91	CARBON	6.8K	5%	1/4W	
R109	⚠1-247-835-91	CARBON	1.5K	5%	1/4W	
R110	⚠1-247-851-91	CARBON	6.8K	5%	1/4W	
R111	⚠1-247-835-91	CARBON	1.5K	5%	1/4W	
R112	⚠1-247-883-91	CARBON	150K	5%	1/4W	
R113	⚠1-247-883-91	CARBON	150K	5%	1/4W	
R114	⚠1-247-861-91	CARBON	18K	5%	1/4W	
R115	⚠1-247-848-91	CARBON	5.1K	5%	1/4W	
R116	⚠1-247-848-91	CARBON	5.1K	5%	1/4W	
R117	⚠1-247-863-91	CARBON	22K	5%	1/4W	
R118	⚠1-247-866-91	CARBON	30K	5%	1/4W	
R119	⚠1-247-855-91	CARBON	10K	5%	1/4W	
R120	⚠1-247-849-91	CARBON	5.6K	5%	1/4W	
R121	⚠1-247-847-91	CARBON	5.6K	5%	1/4W	
R122	⚠1-247-855-91	CARBON	10K	5%	1/4W	
R123	⚠1-247-855-91	CARBON	10K	5%	1/4W	
R124	⚠1-247-873-91	CARBON	56K	5%	1/4W	
R125	⚠1-247-861-91	CARBON	18K	5%	1/4W	
R126	⚠1-247-848-91	CARBON	5.1K	5%	1/4W	
R127	⚠1-247-848-91	CARBON	5.1K	5%	1/4W	
R128	⚠1-247-850-11	CARBON	6.2K	5%	1/4W	
R129	⚠1-247-866-91	CARBON	30K	5%	1/4W	
R130	⚠1-247-848-91	CARBON	5.1K	5%	1/4W	
R131	⚠1-247-848-91	CARBON	5.1K	5%	1/4W	
R132	⚠1-247-848-91	CARBON	5.1K	5%	1/4W	
R133	⚠1-247-848-91	CARBON	5.1K	5%	1/4W	
R134	⚠1-247-848-91	CARBON	5.1K	5%	1/4W	
R135	⚠1-247-855-91	CARBON	10K	5%	1/4W	
R136	⚠1-247-863-91	CARBON	22K	5%	1/4W	
R137	⚠1-247-869-91	CARBON	39K	5%	1/4W	
R138	⚠1-247-864-91	CARBON	24K	5%	1/4W	
R139	⚠1-247-877-91	CARBON	82K	5%	1/4W	
R140	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R141	⚠1-247-843-91	CARBON	3.3K	5%	1/4W	
R142	⚠1-247-783-91	CARBON	10	5%	1/4W	
R143	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R144	⚠1-247-855-91	CARBON	10K	5%	1/4W	
R145	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R146	⚠1-247-871-91	CARBON	47K	5%	1/4W	
R147	⚠1-247-867-91	CARBON	33K	5%	1/4W	
R148	⚠1-247-873-91	CARBON	56K	5%	1/4W	
R149	⚠1-247-851-91	CARBON	6.8K	5%	1/4W	
R150	⚠1-247-851-91	CARBON	6.8K	5%	1/4W	
R151	⚠1-247-848-91	CARBON	5.1K	5%	1/4W	
R152	⚠1-247-851-91	CARBON	6.8K	5%	1/4W	
R153	⚠1-247-851-91	CARBON	6.8K	5%	1/4W	
R154	⚠1-247-848-91	CARBON	5.1K	5%	1/4W	
R155	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R156	⚠1-247-851-91	CARBON	6.8K	5%	1/4W	
R157	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R158	⚠1-247-855-91	CARBON	10K	5%	1/4W	
R159	⚠1-247-855-91	CARBON	10K	5%	1/4W	
R160	⚠1-247-888-91	CARBON	240K	5%	1/4W	
R161	⚠1-247-888-91	CARBON	240K	5%	1/4W	
R162	⚠1-247-855-91	CARBON	10K	5%	1/4W	
R163	⚠1-247-888-91	CARBON	240K	5%	1/4W	
R164	⚠1-247-888-91	CARBON	240K	5%	1/4W	
R165	⚠1-247-867-91	CARBON	33K	5%	1/4W	
R166	⚠1-247-855-91	CARBON	10K	5%	1/4W	
R167	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R168	⚠1-247-843-91	CARBON	3.3K	5%	1/4W	
R169	⚠1-247-783-91	CARBON	10	5%	1/4W	
R170	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R171	⚠1-247-831-91	CARBON	1K	5%	1/4W	
R172	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R173	⚠1-247-843-91	CARBON	3.3K	5%	1/4W	
R174	⚠1-247-867-91	CARBON	33K	5%	1/4W	
R175	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R176	⚠1-247-843-91	CARBON	3.3K	5%	1/4W	
R177	⚠1-247-855-91	CARBON	10K	5%	1/4W	
R178	⚠1-247-851-91	CARBON	6.8K	5%	1/4W	
R179	⚠1-247-851-91	CARBON	6.8K	5%	1/4W	
R180	⚠1-247-851-91	CARBON	6.8K	5%	1/4W	
R181	⚠1-247-851-91	CARBON	6.8K	5%	1/4W	
R182	⚠1-247-831-91	CARBON	1K	5%	1/4W	
R183	⚠1-247-783-91	CARBON	10	5%	1/4W	
R184	⚠1-247-847-91	CARBON	4.7K	5%	1/4W	
R185	⚠1-247-855-91	CARBON	10K	5%	1/4W	
R186	⚠1-247-831-91	CARBON	1K	5%	1/4W	

<THYRISTOR>

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
SCR101	⚠9-936-183-01	THYRISTOR 03P2MT	

****

MISCELLANEOUS
****

REF.NO.	PART NO.	DESCRIPTION	REMARK
	⚠1-223-976-11	RESISTOR ASSY (HIGH-VOLTAGE)	
	⚠1-235-625-11	CAP BLOCK,HIGH-VOLTAGE(HB-900)	
	⚠1-452-429-41	NECK ASSY, PICTURE TUBE (NA366)	
	⚠1-452-810-11	NECK ASSEMBLY, NA-3614	
	⚠1-452-811-11	NECK ASSEMBLY, NA-3615	
	⚠1-453-108-11	DC BLOCK, HIGH-VOLTAGE	
	⚠1-453-108-31	DC BLOCK, HIGH-VOLTAGE	
	⚠1-468-052-11	REGULATOR, SWITCHING	
	⚠1-533-576-11	FUSE,TIME-LAG ((UL)ET) (6.3A/25V) (VPH-1292QM/QMG)	
	⚠1-533-694-11	FUSE (15A/250V) (VPH-1292Q)	
	*1-533-703-11	HOLDER, FUSE (VPH-1292Q)	
	⚠1-558-203-13	LEAD ASSY, HIGH-VOLTAGE	
	⚠1-559-865-31	LEAD ASSY, HIGH-VOLTAGE	
	*1-575-091-11	CABLE, P-P	
	1-575-092-11	CONNECTOR ASSY, MULTI 14P	
	*1-575-099-21	LEAD ASSY, SIELD HIGH VOLTAGE	
	*1-575-099-31	LEAD ASSY, SIELD HIGH VOLTAGE	
	*1-575-099-41	LEAD ASSY, SIELD HIGH VOLTAGE	
	1-698-640-11	FAN, DC	
	1-698-641-11	FAN, DC	
	1-765-144-11	CORD, CONNECTION	
	*1-775-920-11	CABLE (PIN MINIATURE PIN)	
	*1-775-921-11	CABLE (PIN MINIATURE PIN)	
	1-900-212-82	CABLE, FLAT 24P	
	1-900-213-61	LEAD ASSY, FOCUS	
	1-900-215-36	CONNECTOR ASSY, MICRO 2P	
	1-900-215-37	CONNECTOR ASSY, MICRO	
	1-900-215-38	CONNECTOR ASSY, MICRO	
	⚠8-451-468-11	DEFLECTION YOKE (Y636PNN)	
V901	⚠8-733-144-05	PICTURE TUBE 09MFX3(G)	
V902	⚠8-733-145-05	PICTURE TUBE 09MFX3(B)	
V903	⚠8-733-146-05	PICTURE TUBE 09MFX3(R)	

****

ACCESSORIES AND PACKING MATERIALS
****

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*X-4032-749-1	BASE TRAY ASSY	
	⚠1-775-981-11	CORD SET, POWER	
	*3-704-356-01	SHEET (STANDARD), PROTECTION	
	3-800-604-21	MANUAL (LARGE), INSTRUCTION (VPH-1292Q/QM)	
	3-800-604-31	MANUAL (LARGE), INSTRUCTION (ENGLISH, FRENCH) (VPH-1292QMG)	
	3-800-604-41	MANUAL (LARGE), INSTRUCTION (DEUTSCH, ITALIAN) (VPH-1292QMG)	
	3-800-605-21	MANUAL (LARGE), ESTABLISHMENT (VPH-1292Q/QM)	
	3-800-605-31	MANUAL (LARGE), ESTABLISHMENT (ENGLISH, FRENCH) (VPH-1292QMG)	
	3-800-605-41	MANUAL (LARGE), ESTABLISHMENT (DEUTSCH, ITALIAN) (VPH-1292QMG)	
	*4-396-287-01	SPACER	
	*4-396-288-01	BOX, ACCESSORY	
	*4-048-983-01	CUSHION (UPPER) (ASSY)	
	*4-048-984-01	CUSHION (LOWER) (ASSY)	
	*4-048-985-01	PLATE, TOP	
	4-048-986-01	BEAM (A)	
	4-048-987-01	BEAM (B)	
	*4-048-989-01	CARTON, HANDLE	
	*4-048-990-01	PLATE (LEFT), BOTTOM	
	*4-048-991-01	PLATE (RIGHT), BOTTOM	
	*4-048-992-01	INDIVIDUAL CARTON	(VPH-1292Q)
	4-049-801-01	GRIP	
	4-050-004-01	BAG, PROTECTION	
	*4-396-077-01	JOINT	

REMOTE COMMANDER
****

REF.NO.	PART NO.	DESCRIPTION	REMARK
	1-473-443-11	REMOTE COMMANDER (RM-PJ1292)	
	4-395-502-01	COVER (A)	
	4-395-503-91	COVER (B)	
	4-395-504-01	COVER, BATTERY (FOR RM-PJ1292)	

VPH-1292Q/QM/QMG
RM-PJ1292

SONY.
SERVICE MANUAL

US Model
Canadian Model
VPH-1292Q
Chassis No. SCC-D83J-A
AEP Model
VPH-1292QM
Chassis No. SCC-D82H-A
VPH-1292QMG
Chassis No. SCC-D82J-A

CORRECTION-1

File this correction with the service manual.

• INTRODUCTION

CRT and FBT Parts Number have been corrected.

☛ : Indicates corrected portion

Page 338 : 7-3. POWER BLOCK

Incorrect				Correct			
REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
118	3-701-810-21	SCREW, TERMINAL		118	3-701-810-21	SCREW, TERMINAL	
119	*4-043-149-01	BRACKET, HV		119	*4-043-149-01	BRACKET, HV	
120	1-900-215-39	TERMINAL ASSY, FASTON		120	1-900-215-39	TERMINAL ASSY, FASTON	
121	*A-1190-195-A	PB BOARD, COMPLETE		121	*A-1190-195-A	PB BOARD, COMPLETE	
122	⚠1-453-160-12	TRANSFORMER ASSY, FLYBACK (NX-3031)		☛ 122	⚠X-4033-245-1	TRANSFORMER ASSY, FLYBACK (NX-3031//JIS)	

Page 340 : 7-5. PICTURE TUBE

Incorrect				Correct			
REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
201	⚠8-733-145-05	PICTURE TUBE 09MFX3(B)		☛ 201	⚠8-733-145-25	PICTURE TUBE 09MFX3(B)	
202	⚠8-451-468-11	DEFLECTION YOKE (Y636PNN)		202	⚠8-451-468-11	DEFLECTION YOKE (Y636PNN)	
203	⚠1-452-810-11	NECK ASSEMBLY, NA-3614		203	⚠1-452-810-11	NECK ASSEMBLY, NA-3614	
204	4-050-317-01	WEDGE		204	4-050-317-01	WEDGE	
205	⚠1-452-811-11	NECK ASSEMBLY, NA-3615		205	⚠1-452-811-11	NECK ASSEMBLY, NA-3615	
206	⚠1-452-429-41	NECK ASSY, PICTURE TUBE (NA366)		206	⚠1-452-429-41	NECK ASSY, PICTURE TUBE (NA366)	
207	⚠8-733-144-05	PICTURE TUBE 09MFX3(G)		☛ 207	⚠8-733-144-25	PICTURE TUBE 09MFX3(G)	
208	A-1020-745-A	PICTURE TUBE (G) ASSY	202-207	208	A-1020-745-A	PICTURE TUBE (G) ASSY	202-207
209	⚠8-733-146-05	PICTURE TUBE 09MFX3(R)		☛ 209	⚠8-733-146-25	PICTURE TUBE 09MFX3(R)	
210	X-4378-637-1	BAND ASSY		210	X-4378-637-1	BAND ASSY	

Page 352 : 8. ELECTRICAL PARTS LIST

Incorrect				Correct			
REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1190-195-A	PB BOARD, COMPLETE ******************			*A-1190-195-A	PB BOARD, COMPLETE ******************	
		<CONNECTOR>				<CONNECTOR>	
CN241	*1-564-506-11	PLUG, CONNECTOR 3P		CN241	*1-564-506-11	PLUG, CONNECTOR 3P	
		<TRANSFORMER>				<TRANSFORMER>	
FBT210	⚠1-453-160-12	TRANSFORMER ASSY, FLYBACK (NX-3031)		FBT210	⚠X-4033-245-1	TRANSFORMER ASSY, FLYBACK (NX-3031//JIS)	
FBT211	⚠1-453-160-12	TRANSFORMER ASSY, FLYBACK (NX-3031)		FBT211	⚠X-4033-245-1	TRANSFORMER ASSY, FLYBACK (NX-3031//JIS)	

Page 423 : 8. ELECTRICAL PARTS LIST

Incorrect				Correct			
REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
		MISCELLANEOUS *************				MISCELLANEOUS *************	
	1-900-215-36	CONNECTOR ASSY, MICRO 2P			1-900-215-36	CONNECTOR ASSY, MICRO 2P	
	1-900-215-37	CONNECTOR ASSY, MICRO			1-900-215-37	CONNECTOR ASSY, MICRO	
	1-900-215-38	CONNECTOR ASSY, MICRO			1-900-215-38	CONNECTOR ASSY, MICRO	
	⚠8-451-468-11	DEFLECTION YOKE (Y636PNN)			⚠8-451-468-11	DEFLECTION YOKE (Y636PNN)	
V901	⚠8-733-144-05	PICTURE TUBE 09MFX3(G)		V901	⚠8-733-144-25	PICTURE TUBE 09MFX3(G)	
V902	⚠8-733-145-05	PICTURE TUBE 09MFX3(B)		V902	⚠8-733-145-25	PICTURE TUBE 09MFX3(B)	
V903	⚠8-733-146-05	PICTURE TUBE 09MFX3(R)		V903	⚠8-733-146-25	PICTURE TUBE 09MFX3(R)	

9-922-602-91

Sony Corporation
B & I Systems Company

English
95JZ24114-1
Printed in Japan

© 1995. 10